R.S.P. Beekes

The Development of the Proto-Indo-European Laryngeals in Greek

Mouton

THE DEVELOPMENT OF THE PROTO-INDO-EUROPEAN LARYNGEALS IN GREEK

JANUA LINGUARUM

STUDIA MEMORIA E NICOLAI VAN WIJK DEDICATA

edenda curat

C. H. VAN SCHOONEVELD

INDIANA UNIVERSITY

SERIES PRACTICA

42



1969
MOUTON
THE HAGUE · PARIS

THE DEVELOPMENT OF THE PROTO-INDO-EUROPEAN LARYNGEALS IN GREEK

by

R. S. P. BEEKES

LEYDEN UNIVERSITY



1969
MOUTON
THE HAGUE · PARIS

© Copyright 1969 in The Netherlands. Mouton & Co. N.V., Publishers, The Hague.

No part of this book may be translated or reproduced in any form, by print, photoprint, microfilm, or any other means, without written permission from the publishers.

PROEFSCHRIFT LEIDEN 1969

To my Mother



PREFACE

The present book is my Leyden doctoral dissertation. At its various stages of completion the manuscript was read by Professor F.B.J. Kuiper, to whom the book owes much. The task of translating the text from Dutch was entrusted to Mr. T.S. Preston. Work on the book was made possible by a scholarship of the Dutch Ministry of Education and Sciences, which also paid the costs of the translation. I am indebted to Professor C.H. van Schooneveld for his permission to publish this study in the series Janua Linguarum. Drs. J.P. Gumbert was so kind as to read the proofs and to assist in preparing the indexes. Mouton & Co printed the text with their usual care.

Prinsenlaan 23, Oegstgeest, The Netherlands R.S.P. BEEKES



TABLE OF CONTENTS

Preface	
Bibliography	ii
Abbreviations and symbols	i
INTRODUCTION	
A. Conoral	1
	1 7
F	
D. Objective and set-up of the work	3
THE GREEK MATERIAL	
LARYNGEAL AT THE BEGINNING OF THE WORD	
I. Before consonant	8
	8
	8
a. The problem	
1	9
c. The Armenian prothetic vowel	
esse toda a se administration of the contract a part of a second at the second and the second of the second	3
e. The prothetic vowel from en/n according to Seiler 2	
f. The prothetic vowel from p according to Winter 2	
	28
	9
	0
	1
	2
	,2 37
	, , 1
	rı L3

TABLE OF CONTENTS

		j. αν 44
		m. α 48 n. ε 52 o. o 54
		p. α _F 56 q. ο _F 58 r. ε _F 58
		s. Survey of the material for the prothetic vowel 66
	3.	Conclusions
		a. The consonant before which the prothetic vowel stands 69
		b. The timbre not exclusively a 70
		c. The timbre constant
		d. The prothesis constant
		e. Final conclusion
	4.	Special problems
		a. Νέφος
		b. Forms with and without prothetic vowel before o-vocalism of
		the stem
		c. Prothetic vowel before F
		d. Austin's interpretation
		e. Spiritus asper: lenis
		f. "Laryngeal Reflexes in Homer", Austin
		g. Hammerich's interpretation
	5.	Laryngeal and s movable
	٠.	a. The theories of Hoenigswald and Nikitina 82
		b. The material
		c. Interpretation
	6.	The timbre of the Armenian prothetic vowel
	7.	Support for the explanation by means of the laryngeal theory 88
		a. Ablaut
		b. Support in Hittite
		c. Lengthening in Vedic
	8	Nature of the laryngeal
		Laryngeal before i
	٠.	Laryingour boroto g
R	Th	ne negative adjectives with $\nu\eta$ -, $\nu\bar{\alpha}$ -, $\nu\omega$
IJ.		The material
		Interpretation
	۷.	a. Chronology
		b. Conclusion
		c. Attempts at an explanation
		d. Explanation by means of the laryngeal theory
		e. The separate forms
		f. Vanished forms
	2	
	3.	• •
	4.	Summary

	TABLE OF CONTENTS	xiii
II.	C. Attic reduplication 1. The problem 2. The material 3. Conclusions and interpretation a. Criticism; Kuryłowicz' second explanation b. Consonantism of the reduplicative syllable 4. Indian parallel 5. Summary 6. Appendix: nominal forms Before vowel 1. The material a. \hbar_2 b. \hbar_3 c. \hbar_1 2. HRC - 3. PIE a 4. PIE non-apophonic o 5. Armenian LARYNGEAL AT THE END OF THE WORD	113 116 120 122 123 124 124 125 127 127 127 130 131 132 133
III.	After vowel	
137	a. The vocative ending in $-\ddot{a}$	
IV.	After consonant	
V.	After i, u	
	b. The group $-(t)r\hbar$	
	LARYNGEAL IN THE MIDDLE OF THE WORD	
VI.	After vowel before consonant	165
VII.	Between vowels	. 170
VIII.	Before i/i , u/u	. 173
IX.	After consonant before vowel	. 179
Χ.	Between consonants	. 182
XI.	After sonant: the disyllabic roots A. Disyllabic roots with ħ ₂	. 186 . 188

TABLE OF CONTENTS

			b. No disyllabic root
	В.	Di	syllabic roots with \hbar_3 and \hbar_1
			$\rho\omega$ as zero grade $\ \ldots \ $
			a. $\rho\omega$ full grade only $\ .$
			b. Zero grade $\rho\omega$ analogic for $\rho\bar{\alpha}$
			c. Zero grade $\rho\omega$ explained without the aid of the laryngeal
			theory
			d. Zero grade $\rho\omega$ explained by the laryngeal theory
			Zero grade Rh_3 before vowel
			Zero grade $R\hbar_1$ before consonant
		4.	The parallelism with Italic and Celtic
		5.	Zero grade Rh_1 before vowel
		6.	$TeRh_1, T_eRh_1 (T_eRh_3)$
		7.	Full grade $TeRh_3$
		0	a. κορέσαι, λοέσαι; στόρνυμι
		8.	The material for the disyllabic roots with h_3 and h_1
			a. Disyllabic roots with h_3
			5. Disynable roots with n_1
	C.	Sp	ecial problems
			The development of $ToRH-C$ and TRh_3-C
			Loss of the laryngeal in composition
			The presumed development of RH as R_{∂}
			Disyllabic roots with \underline{i} , \underline{u} before the laryngeal 247
		5.	Presents ending in -nēmi and -nōmi
XII.	In	tero	consonantal laryngeal represented by zero
		1.	The so-called apocope
			DIALECTAL DIFFERENCES
		i i	
			Mycenaean
			Arcado-Cyprian
			Aeolic
			West Greek
		٥.	Miscellaneous

TABLE OF CONTENTS	XV
CONCLUSIONS	
 A. Conclusions for the laryngeal theory 1. The number of laryngeals 2. The laryngeal preserved down to the separate languages 3. The vocalic laryngeal and the vocalization of the consonantal laryngeal B. Summary of the Greek developments 	265266267
APPENDICES	
I. Against Szemerényi	275
ADDENDA	
Addenda	285
INDICES	
I. Modern authors	295
II. Subjects	
III. Languages other than Greek	297 200



BIBLIOGRAPHY

Acta Or. = Acta Orientalia (Leiden, 1923 ff.).

Adrados, Estudios = F. R. Adrados, Estudios sobre las laringales indoeuropeas (Madrid, 1961).

AiGr. = J. Wackernagel, Altindische Grammatik (Göttingen, I 1896; Nachträge von A. Debrunner 1957; II 1, 1905; Nachtr. 1957; II 2, 1954; III 1929-30).

AION = Annali dell' Istituto Orientale di Napoli, Sezione linguistica (Roma, 1959ff.).

Ann. di Pisa = Annali della R. Scuola normale superiore di Pisa, Ser. 2 (Bologna-Pisa, 1932 ff.).

Ant. Class. = L'Antiquité Classique (Louvain, 1932ff.).

Arch. Lingu. = Archivum Linguisticum (Glasgow, 1949ff.).

BB = Beiträge zur Kunde der idg. Sprachen, hrsg. von A. Bezzenberger u.a. (Göttingen, 1877-1907).

Bechtel, Hauptprobleme = F. Bechtel, Die Hauptprobleme der idg. Lautlehre seit Schleicher (Göttingen, 1892).

Bechtel, HP = F. Bechtel, Die historischen Personennamen des Griechischen bis zur Kaiserzeit (Halle, 1917).

Bechtel = F. Bechtel, Die Griechischen Dialekte, 1-3 (Berlin, 1921-4).

Bechtel, Lex. = F. Bechtel, Lexilogus zu Homer (Halle, 1914; repr. 1964).

Benveniste, Origines = E. Benveniste, Origines de la formation des noms en indo-européen, I (Paris, 1935).

Boisacq = E. Boisacq, *Dictionnaire étymologique de la langue grecque* (Heidelberg-Paris, 1907-16 = 19504).

Brugmann, Grundr.² = K. Brugmann, Grundriss der vergleichenden Grammatik der idg. Sprachen (Strassburg, I, II 1-3, 1897; 1906; 1909-11; 1916).

Brugmann, KVG = K. Brugmann, Kurze vergleichende Grammatik der idg. Sprachen (Leipzig, 1904). BSL = Bulletin de la Société de linguistique de Paris (Paris, 1868ff.).

Buck, Gr. Diall. = C. D. Buck, The Greek Dialects (Chicago, 1955).

Buning, Ath. Conj. = Adriana Jantine Buning, De Indogermaansche Athematische Conjugatie in het Slavisch, Diss. Leiden (Amsterdam, 1927).

Burrow, Skt. Lg. = T. Burrow, The Sanskrit Language (London, 1955).

Chantraine, Gr. Hom. = P. Chantraine, Grammaire homérique, 1 (Paris, 1958³).

Chantraine, Gr. Hom. 2. = P. Chantraine, id., 2 (Syntaxe) (Paris, 1953).

Chantraine, Morph.² = P. Chantraine, Morphologie historique du grec (Paris, 1961²).

Couvreur, Hett. H = W. Couvreur, De Hettitische H (Leuven, 1937).

Cowgill, 1960 = W. Cowgill, "Evidence for Laryngeals in Greek" in *Evidence for Laryngeals*, ed. W. Winter (Austin, 1960), pp. 93-162.

Cowgill = W. Cowgill, "Evidence in Greek" in Evidence for Laryngeals, ed. W. Winter (The Hague, 1965), pp. 142-80.

Docs. = M. Ventris and J. Chadwick, Documents in Mycenaean Greek (Cambridge, 1956).

Emerita = Emerita, Boletin de Lingüística y Filología Clásica (Madrid, 1933 ff.).

Eos = Eos, Commentarii societatis philologicae Polonorum (Leopoli, 1894ff.).

Ernout-Meillet = A. Ernout et A. Meillet, *Dictionnaire étymologique de la langue latine* (Paris, 1959-604).

Evidence = Evidence for Laryngeals, ed. W. Winter (The Hague, 1965).

Fraenkel = E. Fraenkel, Litauisches etymologisches Wörterbuch (Heidelberg, 1955).

Friedrich (Erg. h.) = J. Friedrich, Hethitisches Wörterbuch (Heidelberg, 1952-4; Ergänzungsheft 1, 1957; 2, 1961; 3, 1966).

Frisk = Hj. Frisk, *Griechisches etymologisches Wörterbuch* (Heidelberg, I, 1954-1960. Lief. 11-17 (σάκτας) 1961-6).

GGA = Göttingische Gelehrte Anzeigen (Berlin-Göttingen, 1739 ff.).

 $GHA = G\"{o}teborgs \, h\"{o}gskolas \, arsskrift \, (G\"{o}teborg, \, 1895-1953).$

Glotta = Glotta. Zeitschrift für griech. u. lat. Sprache (Göttingen, 1909 ff.).

Gnomon = Gnomon, Kritische Zeitschrift für die gesamte klassische Altertumswissenschaft (Berlin, 1925ff.).

Grassmann = Grassmann, Wörterbuch zum Rigveda (Leipzig, 1873).

Güntert, Idg. Abl. = H. Güntert, Idg. Ablautprobleme (Strassburg, 1916).

Hamm, Gramm. = Eva Maria Hamm, Grammatik zu Sappho und Alkaios (Berlin, 19582).

Hammerich, Lar. b. Son. = L. L. Hammerich, Laryngeal before Sonant (Copenhagen, 1948).

Hendriksen, Unters. = H. Hendriksen, Untersuchungen über die Bedeutung des Hethitischen für die Laryngaltheorie (Kopenhagen, 1941).

Hiersche, Unters. = R. Hiersche, Untersuchungen zur Frage der Tenues Aspiratae im Indogermanischen (Wiesbaden, 1964).

Hirt, Ablaut = H. Hirt, Der idg. Ablaut (Strassburg, 1900).

Hirt, Idg. Gr. = H. Hirt, Idg. Grammatik 1-7 (Heidelberg, 1921-37).

Hoekstra, Modifications = A. Hoekstra, Homeric Modifications of Formulaic Prototypes (Amsterdam, 1965).

Hübschmann, Arm. Gr. = H. Hübschmann, Armenische Grammatik, 1 (Leipzig, 1897).

IF = Idg. Forschungen (Strassburg bzw. Berlin, 1892ff.).

IG = Inscriptiones Graecae (Berolini 1873 ff.).

IIJ = Indo-Iranian Journal (The Hague, 1957 ff.).

JAOS = Journal of the American Oriental Society (New Haven, 1849ff.).

Krahe, Spr. u. Vorz. = H. Krahe, Sprache und Vorzeit (Heidelberg, 1954).

Kuiper, Nasalpr. = F. B. J. Kuiper, Die indogermanischen Nasalpräsentia (Amsterdam, 1937).

Kuiper, Notes = id., Notes on Vedic Noun-inflexion (MKNAW 5.4, 1942).

Kuiper, Acta Or. = id., "Vedic sádhiş-: sadhásta- and the Laryngeal Umlaut in Sanskrit" in Acta Or., 20 (1946), 23-35.

Kuiper, *India Antiqua* = id., "Traces of Laryngeals in Vedic Sanskrit" in *India Antiqua*. A volume of oriental studies presented ... to J. P. Vogel (Leiden, 1947), pp. 198-212.

Kuiper, Νώροπι χαλκῷ = id., Νώροπι χαλκῷ (ΜΚΝΑΨ 14.5, 1951).

Kuiper, Shortening = id., Shortening of Final Vowels in the Rigveda (MKNAW 18.11, 1955).

Kuiper, Μνήμης χάριν = id., "The Etymology of ἄνθρωπος" in Μνήμης χάριν, 1, pp. 211-26.

Kuiper, IIJ, 1 = id., "Avestan $mazd\bar{a}$ -" in IIJ, 1 (1957), 86-95.

Kuiper, Die Sprache, 7 = id., "Zur kompositionellen Kürzung im Sanskrit" in Die Sprache, 7 (1961), 14-31.

Kuiper, Lingua, 11 = id., "Atharvavedic abhvá-, N. 'monster'" in Lingua, 11 (1962), 225-30.

Kuryłowicz, Pr. Fil. = J. Kuryłowicz, "Les effets du ϑ en indoiranien" in *Prace Filologiczne*, 11 (1927), 201-43.

Kuryłowicz, Eos = id., "Origine indoeuropéenne du redoublement attique" in Eos, 30 (1927), 206-11. Kuryłowicz, Symb. Rozw. = id., "o indoeuropéen et <u>h</u> hittite" in Symb. Rozw., 1 (1927), 95-104.

Kuryłowicz, Roczn. Or. = id., "Quelques problèmes métriques du Rigvéda" in Rocznik Orjentalistyczny, 4 (1926-8), 196-218.

Kuryłowicz, Etudes = id., Etudes indoeuropéennes, 1 (Kraków, 1935).

Kuryłowicz, Apophonie = id., L'apophonie en indoeuropéen (Wrocław, 1956).

KZ = Zeitschrift für vergleichende Sprachforschung auf dem Gebiete der idg. Sprachen, begr. von
 A. Kuhn (Berlin-Gütersloh-Göttingen, 1852 ff.).

Lg = Language. Journal of the Linguistic Society of America (Baltimore, 1925 ff.).

Leaf = W. Leaf, *The Iliad* (London, I 1900²; II 1902²; repr. 1960).

Lehmann, PIEP = W. Lehmann, Proto-Indo-European Phonology (Austin, 1952).

Lejeune, Traité = M. Lejeune, Traité de phonétique grecque (Paris, 1955²).

Leumann, Hom. W. = M. Leumann, Homerische Wörter (Basel, 1950).

Leumann, Kl. Schr. = M. Leumann, Kleine Schriften (Zürich u. Stuttgart, 1959).

Leumann, Lat. Gr. = M. Leumann und J. B. Hofmann, Stolz-Schmalz, Lateinische Grammatik, I. Laut- u. Formenlehre (München 1926-85).

Lewis-Pedersen = H. Lewis and H. Pedersen, A Concise Comparative Celtic Grammar (Göttingen, 1937).

Lingua = Lingua. International Review of General Linguistics (Amsterdam, 1954ff.).

Locher, Unters. = J. P. Locher, Untersuchungen zu ἱερός hauptsächlich bei Homer. Diss. (Bern, 1963).

LSJ = H. G. Liddell and R. Scott, *A Greek-English Lexicon*. New Ed. by H. S. Jones (Oxford, 1925-40).

Macdonell, Ved. Gr. = A. A. Macdonell, Vedic Grammar (Strassburg, 1910).

MKNAW = Mededelingen der Koninklijke Nederlandse Akademie van Wetenschappen, Afd. Letterkunde. Nieuwe Reeks (Amsterdam).

Mayrhofer = M. Mayrhofer, Kurzgefasstes etymologisches Wörterbuch des Altindischen (Heidelberg, 1953 ff.).

Mehler = J. Mehler, Woordenboek op de gedichten van Homèros ('s-Gravenhage-Rotterdam, 1958^{10} = 1962^{11}).

Meillet, Diall. i.e. = A. Meillet, Les dialectes indo-européens (Paris, 1908, 1922²).

Meillet, Introd. = A. Meillet, Introduction à l'étude comparative des langues indoeuropéennes (Paris, 1934⁷ = 1937⁸; repr. 1949).

Meillet, Aperçu = A. Meillet, Aperçu d'une histoire de la langue grecque (Paris, 1930³).

Meillet, Esquisse² = A. Meillet, Esquisse d'une grammaire comparée de l'arménien classique (Vienne, 1936²).

Meillet, Slave comm. = A. Meillet, Le slave commun (Paris, 1924; 2^{me} éd. avec A. Vaillant, Paris, 1934).

Meillet-Vendryes = A. Meillet et J. Vendryes, Traité de grammaire comparée des langues classiques (Paris, 1948^a).

Mél. Boisacq = Mélanges E. Boisacq, 1-2 (Ann. de l'institut de phil. et d'hist. orient. et slaves, 5-6, Bruxelles, 1937-8).

Μνήμης χάριν = Μνήμης χάριν. Gedenkschrift Paul Kretschmer, 1-2 (Wien, 1956-57).

Moorhouse, Gr. Negatives = A. C. Moorhouse, Studies in the Greek Negatives (Cardiff, 1959).

Mus. Helv. = Museum Helveticum (Basel, 1944ff.).

Pedersen, Cinq. décl. = H. Pedersen, La cinquième déclinaison latine (København, 1926).

Pedersen, Hittitisch = H. Pedersen, Hittitisch und die anderen indoeuropäischen Sprachen (København, 1938).

Pedersen, Lykisch = H. Pedersen, Lykisch und Hittitisch (København, 1938).

Pedersen, VKG = H. Pedersen, Vergleichende Grammatik der keltischen Sprachen (Göttingen, 1. 1909; 2. 1913).

Persson, Beitr. = P. Persson, Beiträge zur idg. Wortforschung, 1-2 (Uppsala, 1912).

Pok. = J. Pokorny, Idg. etymologisches Wörterbuch (Bern, 1949-59).

Rend. Acc. Lincei = Rendiconti della Reale Accademia dei Lincei (Roma, 1892ff.).

Ruijgh, L'élém. ach. = C. J. Ruijgh, L'élément achéen dans la langue épique (Amsterdam, 1957).

Ruijgh, Etudes = C. J. Ruijgh, Etudes sur la grammaire et le vocubulaire du grec mycénien (Amsterdam, 1967).

RV = Rigveda.

De Saussure, Mémoire = F. de Saussure, Mémoire sur le système primitif des voyelles dans les langues indoeuropéennes (Leipzig, 1878).

Schmidt, Pluralbild. = J. Schmidt, Die Pluralbildungen der idg. Neutra (Weimar, 1889).

Schmitt, Idg. Dichterspr. = R. Schmitt., Studien zur idg. Dichtersprache, Diss. (Saarbrücken, 1965).

Schulze, Quaest. = W. Schulze, Quaestiones epicae (Gütersloh, 1892). Schwyzer = E. Schwyzer, Griechische Grammatik, I (München, 1939).

Schwyzer-Debrunner = E. Schwyzer und A. Debrunner, *Griech. Grammatik*, II (Syntax) (München, 1950).

Seiler, Steigerungsformen = H. J. Seiler, Die primären griech. Steigerungsformen (Hamburg, 1950).

Solmsen, Unters. = F. Solmsen, Untersuchungen zur griech. Laut- und Verslehre (Strassburg, 1901).

Solmsen, Wortforsch. = F. Solmsen, Beiträge zur griech. Wortforschung, 1 (Strassburg, 1909).

Sommer = F. Sommer, Handbuch der lateinischen Laut- und Formenlehre (1914² = 1948³).

Die Sprache = Die Sprache. Zeitschrift für Sprachwissenschaft (Wien, 1949ff.).

Sprachgesch. u. Wortbed. = Sprachgeschichte und Wortbedeutung. Festschrift A. Debrunner (Bern, 1954).

Stand u. Aufgaben = Stand und Aufgaben der Sprachwissenschaft. Festschrift für W. Streitberg (Heidelberg, 1924).

Stanford = W. B. Stanford, *Odyssey of Homer* (London, I 1947; II 1948).

Sturtevant, Comp. Gr. = E. H. Sturtevant, A Comparative Grammar of the Hittite Language (New Haven, 1951²).

Symb. Rozw. = Symbolae grammaticae in honorem I. Rozwadowski, 1-2 (Cracoviae, 1927-28).

Szemerényi, Syncope = O. Szemerényi, Syncope in Greek and Indo-European and the Nature of Indo-European Accent (Naples, 1964).

Thurneysen, Handb. = R. Thurneysen, Handbuch des Alt-Irischen, 1 (Heidelberg, 1909).

Vaillant, Gr. comp. = A. Vaillant, Grammaire comparée des langues slaves (Lyon-Paris, I 1950; II 1958).

 $V\bar{a}k = V\bar{a}k$ (Poona, 1952ff.).

Vasmer = M. Vasmer, Russisches etymologisches Wörterbuch, 1-3 (Heidelberg, 1950-58).

De Vries = J. de Vries, Altnordisches etymologisches Wörterbuch (Leiden, 1961).

WH = A. Walde, *Lateinisches etymologisches Wörterbuch*. 3. Aufl. von J. B. Hofmann (Heidelberg, 1938-54).

WP = A. Walde, Vergleichendes Wörterbuch der idg. Sprachen. Hrsg. u. bearb. von J. Pokorny, 1-3 (Berlin und Leipzig, 1927-32).

Winter, Proth. Vok. = W. Winter, Studien zum "prothetischen Vokal" im Griechischen. Diss. Bern (Hamburg, 1950).

Word = Word. Journal of the Linguistic Circle of New York (New York, 1945 ff.).

Addenda

Chadwick-Baumbach = J. Chadwick-L. Baumbach, "The Mycenaean Greek Vocabulary" in *Glotta*, 41 (1963), 157-271.

Chantraine, Dict. Etym. = P. Chantraine, Dictionnaire étymologique de la langue grecque, I A-Δ (Paris, 1968).

Palmer, Interpretation = L. R. Palmer, The Interpretation of Mycenaean Greek Texts (Oxford, 1963). Proceedings Cambr. Coll. Myc. Stud. = Proceedings of the Cambridge Colloquium on Mycenaean studies, ed. L. R. Palmer-J. Chadwick (Cambridge, 1966).

Solta, Stellung = G. R. Solta, Die Stellung des Armenischen im Kreise der indogermanischen Sprachen (Wien, 1960).

Strunk, Nasalpr. = K. Strunk, Nasalpräsentien und Aoriste (Wiesbaden, 1967).

ABBREVIATIONS AND SYMBOLS

ABBREVIATIONS

a. Modern literature

For the abbreviations of books and journals see the bibliography.

b. Languages

The following abbreviations have been used for the names of the languages:

Alb.	Albanian	MHG	Middle High German
Alem.	Allemannic	Mod.	Modern
Arm.	Armenian	Norw.	Norwegian
Av.	Avestan	NPers.	New Persian
Balt.	Baltic, Balto-	O	Old
Bret.	Breton	OBret.	Old Breton
Brit.	Britannic	OCS	Old Church Slavic
Celt.	Celtic	OE	Old English
Corn.	Cornish	OHG	Old High German
Etr.	Etruscan	OIcel.	Old Icelandic
Gaul.	Gaulish	OIr.	Old Irish
GAv.	Gāthā-Avestan	ON	Old Norse
Germ.	Germanic	OP	Old Persian
Goth.	Gothic	OPr.	Old Prussian
Gr.	Greek	OS	Old Saxon
Hitt.	Hittite	Osc.	Oscan
IE	Indo-European	Oss.	Ossetic
Ill.	Illyrian	Phr(yg).	Phrygian
Ind.	Indian	PIE	Proto-Indo-European
IndIr.	Indo-Iranian	Russ.	Russian
Ir.	Iranian	Serb.	Serbian
Ital.	Italic	Skt.	Sanskrit
L.	Late	Sogd.	Sogdian
Lat.	Latin	Swed.	Swedish
Latv.	Latvian	Thrac.	Thracian
LAv.	Late Avestan	Toch.1	Tocharian
Lith.	Lithuanian	Umbr.	Umbrian
Luw.	Luwian	Ved.	Vedic
Lyc.	Lycian	Ven.	Venetic
Lyd.	Lydian	W.	Welsh
M	Middle		

¹ The letters A and B are used to distinguish between the two dialects.

c. Greek dialects

The abbreviations for the Greek dialects are those of Buck, Gr. Diall., p. 2.

d. Classical authors

For the Greek authors the abbreviations of Liddell and Scott have been used. (They are therefore the same as those of Frisk, except that the latter uses German spelling.)

Symbols

indicates reconstructed forms becomes, changes into (has) developed from indicates in words the syllable boundary, in verses the end of the verse in citing Homer: nearly identical verses Vany vowel (\overline{V} long, \overline{V} short vowel) R any sonant C any consonant Tany occlusive Hany laryngeal ħ laryngeal2 of which the "colour" is not known $\hbar_1 \, \hbar_2 \, \hbar_3$ the e-, a- and o-colouring laryngeal respectively.

² There are many symbols used to designate the laryngeals; see Introduction, p. 2. The use of capitals in the middle of a word is annoying to the reader. Symbols like '': $? \times \gamma$ have the disadvantage that their meaning is not evident. The same applies to the figures, but these have meanwhile become generally known. The use of a/a is confusing, since this symbol after all serves to indicate a vowel. I am therefore following Kuiper in the use of h; see his views on this, *Notes*, p. 3 n. 1.

INTRODUCTION

Ich finde es sehr erheiternd, wenn Whatmough in allem Ernste Pokorny den Vorwurf macht, dass er in der Aufzeichnung der idg. Wurzeln nicht die ... Laryngale angewendet habe!

V. Pisani, Allg. u. vgl. Sprachwiss., 1953, p. 47

INTRODUCTION

οὕτοι ἀπ' ἀρχῆς πάντα θεοὶ θνητοῖς παρέδειξαν, ἀλλὰ χρόνω ζητοῦντες ἐφευρίσκουσιν ἄμεινον.

XENOPHANES, D. B 18

The writer's task is to ... write when there is something you know; and not before; and not too damned much after.

ERNEST HEMINGWAY

A. GENERAL

The laryngeal theory is not of recent date. In fact it is nearly ninety years ago now that it was formulated by Ferdinand de Saussure in his Mémoire sur le système primitif des voyelles dans les langues indo-européennes, in 1878.¹ That was at a time of discoveries that were of fundamental importance to comparative Indo-European linguistics. It was then that the "Ausnahmslosigkeit der Lautgesetze" was found and defined.² In the same year (1876) Osthoff's discovery of the liquida sonans³ and that of the nasalis sonans by Brugmann⁴ were published.⁵ The last two discoveries gave an entirely new understanding of the phoneme system of the proto-language, especially of the vowel system. At this stage De Saussure put forward his view, in which an essential place was occupied by the "coefficients sonantiques" which he postulated and which since Møller have been called laryngeals. However, De Saussure's system was outstripped by that of Brugmann and others, codified in the Grundriss (1886). The influence exerted by this work in the German-speaking area in particular was and still is so great that as recently as 1965 it could be said of someone that he used it "almost as god-given revelation".6

It is understandable that the theory found little acceptance in the first years of its existence, since the idea was based largely on a schematic analysis for which no concrete facts could be adduced as arguments. But it may be considered surprising

- ¹ Although the title page has the date 1879, it was published in 1878, as the author remarks in the foreword to the new edition in 1887.
- ² Leskien, Declination im Slavischlitauischen und Germanischen (1876), Einl., p. xxviii; Osthoff-Brugmann, Morphologische Untersuchungen 1 (1878) xiii.

³ Paul und Braunes Beiträge, 3 (1876), 1-89, in particular p. 52f.

- ⁴ Studien zur Griech. u. Lat. Gramm., hrsg. von G. Curtius, 9 (1876), 285-338.
- ⁵ These two had incidentally already been found by De Saussure in 1872-5, when he was still at school. (For what he says about this see *Cahiers Ferd. Sauss.* 17 (1960) 23f.)

⁶ Polomé, with reference to Kronasser, Evidence, p. 36.

that today, after so many years of research, the theory is definitely not yet universally accepted — or universally rejected. The reason seems in part to be an emotional question. Anyone brought up with Brugmann's system is confronted with a group of sounds whose phonetic value can be indicated only very vaguely, which had different functions in the proto-language, which passed through many developments in the individual languages and which are reproduced in the literature by a variety of not very attractive signs ($\theta_{1-4} H_{1-4} H A E O A^w H^y X Z \Omega$) `? $P \times \gamma h h_{1-3}$. The reconstructed forms, which not infrequently contain two or more laryngeals, assume a deterring appearance (* $h_3bhr\acute{e}u\hbar s$, * $ple\hbar_1dh\psi e\hbar_1s$, * $\hbar_1h\hbar_2h$ -, * $\hbar_3me\hbar_3mo\hbar_3\hbar_2e$), which renders them unpronounceable for most Europeans and which, compared with the familiar picture, seems very un-Indo-European. The theory is based on an "algebraicstructural" analysis, which daunts many and seems too abstract, too remote from the concrete facts. This feeling is strikingly expressed by Vendryes' words: "le désastre est moins grand qu'une première impression ne ferait croire."8 Partly as a result of this — more rational arguments will be stated below — the parties adopted sharply opposed positions and a sensible discussion between adherents and opponents never really came about. In their enthusiasm some proponents certainly went much too far. This upset confidence in the theory and the resultant general scepticism also discredited what was reliable. Criticism thus became so violent that even adherents began to doubt the truth of many explanations. It is highly regrettable that Kurylowicz — partly through his increasing interest in structural problems renounced many of his brilliant observations. In this way, however, the theory lost so much of its content that the critics could in turn retort that it makes little difference whether \bar{a} or $e\hbar_2$ is assumed for the proto-language if this does not have the slightest consequences for the explanation of the historical forms. For instance, Frisk says in the preface to the first part of his dictionary (p. vi): "Für die griechische Etymologie fällt sowieso die Laryngaltheorie, sie mag prinzipiell noch so wichtig sein, nicht schwer ins Gewicht. Die offenbare genetische Identität von ἄγω, lat. ago, aind. ájati usw. wird nicht greifbarer, wenn man als gemeinsamen Ursprung eine 'Wurzel' 22egansetzt". And so on. This statement of the case testifies to a lack of understanding of the laryngeal theory and may even be called unscientific. If the root in the proto-language had the form $\partial_2 e \hat{g}$, it must be stated in that form.¹⁰ It may or

⁷ Polomé, *ibid.*, p. 10, n. 8.

⁸ BSL, 37 (1936), 34f; in the first instance this is directed towards Benveniste's Origines.

⁹ See for instance AiGr. Nachtr., p. 81, 28.

One can of course proceed from the view that the forms reconstructed for PIE need not be stated in an etymological dictionary of Greek. However, this ignores the fact that these dictionaries are used in the first place by Indo-Europeanists. Of course Frisk is right when he says (p. v): "Es ist kein indogermanisches Wörterbuch nach griechischen Stichwörtern." But the Greek material should be pursued as far as possible and this research only ends (in the case of inherited words) at the basic language. For the connection with the other languages a reconstruction of the forms of the proto-language is often necessary. If this is not done, much remains unclear to the majority of readers. Insofar as the cognate forms of the other languages do not contribute to the explanation of the Greek words, it may of course suffice to refer to the lemmata in the etymological dictionaries of these languages. Incidentally, it must be said that Frisk's treatment largely satisfies these require-

may not be clear whether this finding has further consequences for the interpretation of Greek or another language, but in an etymological dictionary reference should be made to this interpretation of the material compared. This scepticism should be compared with the words with which Chantraine, $Morph.^2$ 4-15, concludes his treatment of the laryngeal theory (which is more positive than that in the 1947 edition, p. v-ix): "Les faits analysés ... doivent être placés à leur niveau, qui est celui de l'indo-européen le plus ancien. Sur le plan grec, il ne s'agit que d'archaïsmes figurant dans des formes ou des mots, sans doute importants, mais rares et dispersés. Nous ne saisissons là que des débris". Finally, mention may be made here of the words with which Cowgill starts his treatment of the subject in *Evidence* (p. 143): "To my mind, there is relatively little in Greek itself that can be explained better by laryngeal theory than without it". This pronouncement is a result of the fact that Cowgill — who without doubt must be considered one of the adherents of the theory — in my opinion wrongly rejects many explanations which the theory renders possible.

Recently (1964) Hiersche, *Unters*. 10-2, summarized his objections to the laryngeal theory in six points. As these are more or less the general objections of the theory's opponents, it may be as well to discuss them briefly here.¹¹ For it seems to me that all the points can be adequately answered, albeit not all refuted. His points are as follows (the quotations are not complete):

- (1) Als blosse Symbole für Laute unbekannter Qualität, die nur in ihren Reflexen fassbar werden, bringen die Laryngale keine echte Lösung
 - (2) Bedenklich ist die Vielzahl der Laryngale, deren Skala jetzt von 1 bis 10 reicht.
- (3) Die phonetische Natur der Laryngale konnte bisher nicht eindeutig bestimmt werden.
- (4) Die Laryngale sind in der Lage, beinahe jede Lautveränderung hervorzurufen oder selbst zu erfahren, was in der allgemeinen Phonetik nicht seinesgleichen hat.
- (5) Die Laryngaltheorie kommt zumeist ohne Annahme von Analogiewirkungen, umständliche Hilfskonstruktionen, Aufstellung neuer, oft wenig überzeugender und gewaltsamer Etymologien nicht aus.
- (6) Die Laryngaltheorie lässt oft eine kritisch-philologische Sichtung des von ihr verwerteten Materials vermissen.

The first point is based on a lack of methodical insight. The comparative historical study of language knows only reflexes. It will suffice here to refer to Meillet's explanation of the method in his *Introduction*, e.g. p. 44: "... un phonème indo-européen est défini par un système de correspondances". It will be clear that only after such a system has been drawn up as accurately as possible can one try to obtain an idea of the

ments, much more than the dictionaries of De Vries and Fraenkel, where one too often finds merely a list of the cognate words, without a discussion of the genetic connection. The present author has consequently made grateful use of Frisk's extensive work, which may be stated here as a counterweight to the criticism which this book gives.

¹¹ After the following had been written, I found that it agrees almost entirely and is sometimes literally identical with the criticism by Kuiper in *IIJ*, 9 (1966), 223 f.

phonetic value that this phoneme must have had. However, this necessarily remains at all times a broad approximation.

In my opinion point 3 is identical with point 1. As we have seen, the fact that the phonetic value can hardly be determined need not be an essential drawback.

The discussion of the number of laryngeals is indeed — in part — a depressing business. But it is rather unfair to call the extremes 1 and 10. Once the starting-point of the theory has been accepted, practically everyone explains the \bar{e} and \bar{a} assumed for the proto-language as $e\hbar_1$ and $e\hbar_2$ respectively, so that two laryngeals are almost universally assumed. 12 The existence of the third is less evident, since \bar{o} could be explained as an ablaut variant (i.e. from oh_1 , with or without in addition $oh_2 > \bar{o}$). The existence of a third laryngeal has therefore never been considered proven by Pedersen. To demonstrate this third laryngeal is one of the principal objectives of this book. A fourth laryngeal was assumed on the strength of interpretation of the Hittite material. In my opinion this is a weak basis, since the interpretation of Hittite still presents many difficulties (see below). I cannot appraise Hamp's attempt to demonstrate the fourth laryngeal in Albanian (Evidence, pp. 123-41). However, I believe that the same objection applies here as in the case of Hittite. Now if an eminent scholar like Pedersen did not consider the existence of the third laryngeal as irrefutably proven, and on the other hand Kurylowicz and Sturtevant, two other great proponents of the theory, felt themselves obliged to assume a fourth, it is a puzzle to me how anyone can come to assume more than four. These have largely been posited on the strength of theoretical considerations.¹³ However, as long as such considerations find no support from facts, the "correspondances", and an adequate number of these, they may not be taken as a basis. One should assume two laryngeals, the third has still to be demonstrated — and I believe that the Greek material does not leave the slightest doubt about this — and a fourth may prove necessary once the interpretation of the Hittite (and the Albanian) material has become more reliable.

What is stated under point 4 may at first sight appear disquieting; once the principle of the theory has been accepted, the question is to investigate which developments are probable and which are not. "Dehnung" and "Abtönung" are the two bases of the theory $(e\hbar_2C > \bar{a}C)$. It may be a point of discussion whether the consonantal laryngeal can cause aspiration (and sonorization); however, these are the only phonetic developments (apart from vocalization) that can be mentioned. Development to k or r is assumed by only a few and can safely be left out of consideration. On the other hand, the fact that the Greek and Armenian prothetic vowel, Attic reduplication and other phenomena can be explained by the theory, practically without auxiliary hypotheses, can only plead in favour of the theory. Indeed, it is the best conceivable

¹² Only Zgusta, Archiv Orientálni, 19 (1951), 428-72, made do with one laryngeal. He based his theory on the Hittite data and was of the opinion that the opposition h:hh could not yet be regarded as evidence of two different laryngeals.

¹³ See for instance Puhvel's scheme in *Evidence*, p. 92, where six laryngeals are assumed on the strength of a presumed opposition voiced:voiceless.

support for a theory if it can explain other facts than those on the strength of which it was drawn up. Now the laryngeal theory proves capable of giving an explanation on entirely different points, which raises its correctness above all doubt.

It is not true to say (point 5) that laryngeal theory does not work without complicated auxiliary hypotheses. Here Hiersche bases his criticism on the most unfortunate excesses of the theory, which — and that must be admitted — are to be regretted.¹⁴ It must be pointed out that Kurylowicz' explanations were of great simplicity, which impressed even opponents (such as Marstrander).¹⁵ As against Debrunner's words quoted by Hiersche¹⁶ one can, however, set the former's pronouncement: "Die Forschungen K.'s ... erklären ... zahlreiche Absonderlichkeiten der idg. Lautlehre überraschend leicht." The explanations of certain phenomena in Greek defended in the present book are likewise of extreme simplicity (cf. in particular part three: "Conclusions"). Analogy is of course a general linguistic phenomenon, and when allowance is made for the effect of analogy in the application of the theory no excuse need be offered for so doing.

Systematic critical-philological research into material is one of the weakest points of most laryngealists. It is indeed irritating to see that conclusions are often built up on two or three facts. I hope that this book does not suffer from that defect.

A strict distinction must therefore be made between the theory and its application by individual researchers. It is undeniably true that the manner in which many have used it cannot withstand the test of criticism. But I do not see an essential argument against the theory in these six points.

Like all theories, the theory must be appraised by verifying it against the facts. Theoretical discussions can do no more than state possibilities. A parallel case is the deciphering of Mycenaean: the starting-points on which the deciphering was based

¹⁴ See for instance the theory of Vey discussed below (p. 209). Compare also the pronouncements of decided laryngealists on Lehmann's hypotheses about Germanic (in *PIEP*, pp. 36-73): "the least convincing and inspiring sections of the book, with their array of phonetic laws established upon a handful of pretty inconclusive cases, with little or no regard to phonetic likelihood" (Martinet, *Word*, 9 (1953), 287) and "His argumentation ... too often consists of a concatenation of assumptions, none of which has a solid foundation in facts" (Kuiper, *Lingua*, 5 (1955), 319-24).

¹⁵ For instance Polomé, *Evidence*, p. 26, n. 116, calls Zgusta's ablaut scheme, which corresponds to the one defended in this book, "extremely simple": with something of regret?

¹⁶ "Alle Erscheinungen, die sich mit einiger Wahrscheinlichkeit ohne die Laryngaltheorie erklären lassen, sollen mit Laryngalen verschont werden"; etc. *Kratylos*, 3 (1958), 29.

¹⁷ IJb, 13 (1929), 67. It emerges from this how greatly confidence in the theory suffered in those years among some — and not the least important — authorities.

An interesting example is the article by Wyatt, Lg 40 (1964), 138-52. One of his opinions is that the argument by Cuny (see p. 203 of this book) that $CR \ge C$ cannot explain the historically demonstrable forms, so that $CR \ge C$ must be assumed, "is a false issue, since it is a phonetic guess" and not a phonemic consideration. Such a manner of reasoning is something that I cannot follow: if the historical facts point to a consonantal \ge , how can one then argue on the strength of a theoretical consideration that this is "a false issue"? After all, this finding gives an important property of the phoneme. Here the structural method is wrongly used in the field of linguistic-historical research, by giving structural considerations a priority that cannot be founded on facts.

are irrelevant to the question of the accuracy of the deciphering, now that the result irrefutably demonstrates the correctness thereof.

How has this verification to be performed? In the first place, of course, the philological examination of the material urged by Hiersche is required. For this it is desirable first to consider all possible developments within one language or linguistic group, making use only of what can be regarded as definite from the other languages.¹⁹ The languages most suitable for study are without any doubt Hittite, Indo-Iranian and Greek. There seems to be a widely held view that all research in this field must begin with Hittite.²⁰ I doubt this. In my opinion the interpretation of Hittite still offers too many difficulties for a "philologische Sichtung" to be sufficiently reliable in that case. Compared with the more than two millennia during which Indian and Greek have been studied, the study of Hittite (since 1917) may be said to have just begun. Moreover, there is much less material available of this language and the script presents particular difficulties. This consequently means that the chance of incorrect interpretation is greater here than in Indian and Greek. Indo-Iranian offers many prospects. As a result it is not coincidental that Kuryłowicz took up the theory again (in 1926) from Indo-Iranian (and Greek) and not only from Hittite, as is often suggested. However, in Indo-Iranian the problems seem more complicated and the material is more extensive than in Greek, while the latter language has the advantage of having preserved the original timbre of the laryngeals. Consequently a systematic treatment of the Greek material seems useful at this time.

There is no manual for the theory and evidently the time is not yet ripe for this. Since Kuryłowicz' *Etudes* (1935), which is still the best, nothing of this kind has been published. For Lehmann's book see the criticism cited above (p. 5 n. 14). *Evidence* (1965) is a collection of papers of a very varied nature. The one by Cowgill seems to me to be among the best. I have therefore made grateful use of it (initially in the 1960 version), but I differ in opinion from him on many essential points.

For it is evident that the laryngeals existed down to the separate languages. The following may be commented on this. If the laryngeals were not preserved down to the separate languages, that would mean that they had already disappeared from the proto-language as independent phonemes. If this were so, they would not, by definition, be demonstrable by the comparative method; the theory would have to remain a hypothesis for ever. In this form the laryngeal theory would therefore be a glottogonic speculation. However, the laryngeal theory proceeds from the fact that the phoneme that is determined by the correspondence Ind.-Ir. i — other languages a (i.e. the earlier shwa, a) always or usually had a consonantal function. That this phoneme was preserved down to the separate languages can therefore not be doubted, by definition, since it is the phoneme which — inter alia is determined by the above correspondence: if it had disappeared without trace or merged with another phoneme in the proto-language, it could not have had a separate series of correspondences. The real problem is therefore: 1. was this phoneme in fact always or at least usually consonantal? and 2. was it preserved in all positions down to the separate languages? This question can be answered only by investigating the development of this phoneme in every conceivable position in all languages. If the assumption that the phoneme was (or could be) consonantal proves to explain more than that according to which it was exclusively vocalic, the theory must be regarded as correct.

²⁰ For instance Couvreur, *Ant. Class.*, 12 (1944), 104: "Il est évident que toute étude sur les phonèmes 'laryngaux' en indo-européen doit avoir son point de départ en hittite."

B. STARTING-POINTS

It is not necessary here to give a survey of the history of the research, since Polomé did that recently in detail (*Evidence*, pp. 9-44). However, it is necessary to determine our position in the sea of views. Of the dominant figures, little mention will be made of Sturtevant in the following observations. The three most important points in his interpretation are: (1) he assumes four laryngeals; (2) he disclaims vocalization of the laryngeal; (3) he connects the theory with his Indo-Hittite hypothesis. These starting-points are unacceptable to me. The number of laryngeals has been discussed above. It seems to me incorrect to assume when studying Greek that there was a fourth laryngeal. Sturtevant's solution of the vocalic representation of the laryngeal (for which he assumes h_e , laryngeal followed by a reduced vowel) is untenable; the first chapter of this book gives a clear argument for this (besides the others that there are). The Indo-Hittite hypothesis need not be further discussed here. Further theories of Sturtevant have also proved untenable.²¹

The basis on which this book rests is formed by the studies of Pedersen and Kuryłowicz. Pedersen had already incorporated the theory in his *Vergleichende Grammatik* (1.177-83) in 1909. In 1926 he used it to explain the Latin fifth declension, in 1938 he drew a parallel between Hittite and Indian and in 1945 he demonstrated that the Lycian χ corresponds to the Hittite h and is a direct representative of a laryngeal.

Kuryłowicz' articles from 1926 to 1928 and their summary in his *Etudes* meant a revival of the theory, which had passed into oblivion since 1900 (except in the case of a few scholars, such as Pedersen and Cuny). Although his observations on Indian and Greek are no less important, the spectacular interpretation of the Hittite b as the reproduction of a direct representative of a PIE laryngeal drew particular attention to the theory.²² Unfortunately, as stated above, in his later works he abandoned many of his ideas.

In a series of studies (since 1942) Kuiper has dealt with various problems in Indo-Iranian which are of importance to the theory. These articles, like those by Kuryłowicz, are listed in the bibliography.

In the following a summary is given of what is regarded as proven from now on. The fundamentals of the laryngeal theory taken as starting-points are the following:

²¹ For example his explanation of the Greek κ-perfect; see the discussion in Cowgill, p. 175f.

One of the most striking cases of parallel discoveries is that Cuny published the same idea in a footnote which ended up on the page opposite to the one on which the article by Kuryłowicz begins (Symb. Rozw., pp. 94 and 95). This discovery is of great fundamental significance, but in practice it is less important than one had hoped: "Diese Bestätigung, die erst gefunden wurde, nachdem die Theorie ... ungefähr ihre endliche Form erreicht hatte, zeigt, auf wie sicherer theoretischer Grundlage die Theorie aufgebaut ist. Es darf als ein Triumph der vergleichende Sprachwissenschaft betrachtet werden, dass sie imstande war, die frühere Existenz eines Lautes nachzuweisen, der in den damals bekannten Sprachen verschwunden war und erst später in einer neu entdeckten Sprache auftauchte" (Hendriksen, Unters., p. 19); "almost disappointing as a support for the theory" (Lehmann, PIEP, p. 25).

- (1) the proto-language had at least two laryngeals (h_1 and h_2);
- (2) the laryngeals are mostly consonantal, but the proto-language also had vocalic allophones (\$\bar{k}\$);
- (3) in most positions the laryngeals have been preserved down to the individual languages;
 - (4) in various languages a PIE consonantal laryngeal could be vocalized;
- (5) in Hittite h can be a direct representative of a PIE laryngeal (to which χ corresponds in Lycian);
- (6) a number of phenomena in Indo-Iranian to be further specified are caused by a laryngeal.

Some remarks may be made on these points.

The first needs no comment. Cf. p. 4 above.

Re 2. Kuiper pointed to the need to assume both vocalic and consonantal laryngeals for the proto-language. The following concise arguments are taken from his *Notes*, p. 20ff. The Indo-Iranian forms of the word for 'daughter' point to gh, which must have been formed from $g+\hbar$. As here the laryngeal cannot have stood before a vowel, it must have brought about aspiration of the preceding occlusive between consonants as well. As the same situation occurs with the word for 'father', one would expect *phitar- here; the form pitar- can be explained only by assuming a vocalic laryngeal which did not aspirate the preceding occlusive.

Skt. duhitár- points to aspiration by the consonantal laryngeal, but the i must stem from a vocalic laryngeal. This suggests that this word has had a paradigmatic change \hbar/\hbar . The truth of this assumption is demonstrated by the Late Avestan forms of the word for 'father':

nom. sg.
$$pita$$
 dat. sg. $f = \delta r \bar{o} i$ acc. sg. $pitar = m$ dat. pl. $pt = r \bar{o} b y \bar{o}$

The *i* is thus missing in the weak cases, where evidently a consonantal laryngeal has disappeared, which apparently always happened in Avestan (after aspiration of the preceding occlusive, *phtr-V- > *phtr-V- > *ftr-V- > *f9r-V- > f\delta r-V- as against *phtr-C- > *phtr-C- > *ftr-C- > ptr-C). In the strong cases the *i* must then be attributed to a laryngeal already vocalic in the proto-language.

- Re 3. What is posited above follows from the difference discussed above between Indian and Iranian and from points 5 and 6. Cf. above p. 6 n. 19.
- Re 4. For Indian this follows for instance from the neuter plural, of which the ending must have been a consonantal \hbar , as appears from Av. $man\mathring{a}/man\mathring{a}h/$; cf. p. 152. Skt. $m\acute{a}n\ddot{a}m\dot{s}i$ points to a secondary vocalization. In the same way we have Av. $n\ddot{a}man$ as against Skt. $n\acute{a}m\ddot{a}ni$.

Indian often has i where the laryngeal has disappeared in Avestan, e.g. Skt. $v_i n_i t \dot{e}$: Av. $v_i r_i t \dot{e}$: Av. $v_i r_i t \dot{e}$: $v_i r_i t \dot{e}$: Av. $v_i r_i t \dot{e}$: $v_i r_i t \dot{e}$: $v_i r_i t \dot{e}$: Av. $v_i r_i t \dot{e}$: $v_i r_i t \dot{e}$: Av. $v_i r_i t \dot{e}$: $v_i r_i t \dot{e}$: Av. $v_i r_i$

A special case is Skt. $tigit\acute{a}$ - 'sharp'. As Avestan has no participle ending in -ita-(cf. Av. garapta-: Skt. $grbh\bar{\imath}t\acute{a}$ -), the ending here must be based on - $\hbar to$ - (with secondary vocalization in Indian). This form - $\hbar to$ - has then been preserved as such in the individual languages. This will also have been the case in $tigit\acute{a}$ -, which explains why the g is not palatized here. The latter in turn confirms the truth of this interpretation.

It may be useful to summarize the representation in Indo-Iranian:

PIE
$$\hbar$$
 Av. i Ind. i zero zero/ i

It will be clear that the above is important to the question whether one is concerned with a consonantal or a vocalic laryngeal of the proto-language. The vocalic laryngeal is — by definition — found in all languages as a vowel, but once it coincided with vowels of a different origin it was naturally subjected to more recent sound changes. If, therefore, the laryngeal has disappeared in one language in the corresponding form, where a vowel would normally have been retained, the proto-language had the consonantal allophone here.

The only way of establishing a vocalic laryngeal with certainty seems at present to be comparison with the Avestan forms. For in this language secondary vocalization does not appear to have occurred (although of course it should be asked what criterion there is for this). The Germanic and Hittite material does not in my opinion as yet allow of sufficiently reliable conclusions in this respect. The vocalic allophone is therefore the most difficult to establish and if a corresponding form is missing in Avestan — which of course is often the case — certainty is difficult to acquire here. Since, as we shall see, secondary vocalization was very pronounced in Greek, when further proof is impossible it will be assumed that the laryngeal was consonantal.

- Re 5. For this no further proof is required. The opposition h:hh is not used in this book.
- Re 6. Various phenomena in Indo-Iranian can be most easily explained with the aid of laryngeal theory. The principal ones are the following.
- (a) An aspirate in Indo-Iranian that corresponds to a non-aspirate in the other languages can be caused by a laryngeal following the occlusive. This point is now almost universally accepted. The clearest example is GAv. dugdar-, which must have been formed from * $dhug\hbar ter$ according to Bartholomae's Law (*dhughtar-> *dhugdhar-> dugdar-). As the latter must have operated in the Indo-Iranian period, the transition $g\hbar > gh$ must be still older. Of antevocalic instances there are, among many others, the celebrated cases $p_l th\hat{u}$ and $p\hat{a}nth\hat{a}h$, which are discussed on p. 179; cf. under b as well.
- (b) Some cases of hiatus are explained by assuming that at least until shortly before the period of the oldest texts a laryngeal stood between the vowels concerned.

For instance, one finds (the hiatus is indicated by '):

Ved. bha'as- for bhās- from the stem bhā-, PIE *bheh-es-, the type manas-, PIE *men-es-;

Ved. pántha'am for pánthām, Av. pantam /panta'am/, PIE *ponteħ1-m;

Av. mazda'am, PIE *mnz-deh1-m;

Ved. type vṛki aḥ, tanú aḥ, PIE *ulk"-iħ-ós, *ten-uħ-ós;

Ved. préstha-/prayistha-/, PIE *preiħ-is-.

In Vedic only a few traces are left of such a hiatus, preserved as archaisms, but Gāthā-Avestan seems to display a hiatus consistently in all cases where a laryngeal must be assumed.

It should be pointed out that in the inflexion of the word for 'path' the two phenomena mentioned occur; Avestan has here preserved the original situation the best:

```
sg. nom. PIE *pont-é\hbar_1-s LAv. |pantāh| acc. *pont-é\hbar_1-m LAv. |panta^cam| gen. *p\etat-\hbar_1-os LAv. |pa\thetaah|
```

(c) Apparent exceptions to Brugmann's Law are explained by assuming that these forms originally contained a consonantal laryngeal, so that the o was in a closed syllable. This is found in:

separate words, e.g. jána- < * \hat{g} on \hbar_1 -o-, Gr. γόνος;

the first person singular perfect active, type $cak\acute{a}ra < *k^ue-k^uor-\hbar_2e$ (with the ending $-\hbar_2e$, Hitt. -ha, Lyc. $- \chi a$, Gr. $-\alpha$), as against 3 sg. $cak\acute{a}ra < *k^ue-k^uor-e$;

the causatives, type $jan \acute{a}yati < *\hat{g}on\hbar_1-\acute{e}jeti$, as against $p\bar{a}d\acute{a}yati$;

the aorist passive, type ájani < *é-ĝonħ₁-i, as against ákāri.

- (d) Vedic forms that end in a long vowel but have a short vowel *in pausa* indicate that in Indian the form still ended on a laryngeal shortly before the beginning of transmission. This phenomenon is discussed in greater detail on p. 145 f.
- (e) Indian had laryngeal umlaut; the colour (i) of a 'prop-vowel' (either of PIE origin, or of more recent date) was determined by a following laryngeal even if these two sounds were separated by a sonant. For instance $timir\acute{a} < *t_em\hbar r\acute{o}$. The development of the sonant + laryngeal group is based on the same principle, e.g. $r\hbar$ to $\bar{r}r$ before consonant, ir before vowel, which must have gone via a phase $e^{r\hbar} > ir\hbar$. For a more detailed discussion see p. 208.
- (f) When a zero in Avestan responds to an i in Indian, we are concerned with a consonantal laryngeal vocalized in Indian. For instance $grbh\bar{\iota}t\dot{\iota}$: grrapta. See further under point 4.
- (g) An *i*/zero interchange within Indian (and Iranian) will go back to a paradigmatic interchange of vocalic and consonantal laryngeal. For this interchange see under point 2 and also compare:

```
nom. acc. sg. jánima : instr. sg. jánmanā, etc.; mahimán- (in mahimná): instr. mahná (<*maźhmná<*me§ħ₂mnē); vánitā, vánitāram: instr. vantrá, etc.
```

(h) The compositional shortening of the type carkṛti- as against kīrti- can be

explained only by assuming that the laryngeal has disappeared from *krħti-. For a more detailed discussion see p. 166, 204 and 242 ff.

C. FURTHER ASSUMPTIONS

It seems useful here to point explicitly to three matters which are of importance to this work. What is posited here will be used without further argumentation. They are the following.

(1) PIE had a phoneme /e/, which can best be described as a not very clear vowel, which was probably formed in an earlier stage of the proto-language through weakening from e as a result of stress effect. This is the so-called *shwa secundum*, ²³ Meillet's °, Sturtevant's e.

This is not the place to reproduce and consider the long discussion on this problem. For recent literature see Polomé, *Evidence*, p. 29 n. 126. In my opinion, various forms oblige us to assume such a phoneme; we need only envisage such Latin ones as quattuor and canis and Greek ones like $\beta\alpha\rho\dot{\alpha}$ (Skt. $gur\dot{u}$ -) < PIE $*g^u_er\dot{u}$ -; cf. the type $p\dot{\alpha}mi~p\bar{\alpha}m\dot{\alpha}h$ from $*p\dot{\epsilon}hmi~*p_ehm\dot{\epsilon}s$, Kuryłowicz *Etudes*, p. 56 f. In this work the need is shown to assume such a phoneme for the proto-language for a certain category (p. 260 ff.), but in numerous other forms this assumption likewise proves inescapable.

(2) PIE had two types of inflexion, known as proterodynamic and hysterodynamic. Hysterodynamic inflexion is characterized by the zero grade of the suffix in all cases of the singular except the nominative and the accusative, with the ending -e/os in the genitive. Proterodynamic inflexion, on the other hand, has the full grade of the suffix in the weak cases, with the ending -s in the genitive. The change in the suffix is responded to by a similar one in the stem. The stress seems to have been a decisive factor. The essential thing is that the two types of inflexion appear to have been possible in all nominal classes. For instance:

	hysterodynamic	proterodynamic
sg. nom.	πατήρ $<$ - $\acute{e}r$	*mént-i-s
acc.	πατέρα $<$ - $\acute{e}r$ - \emph{m}	*mént-i-m
gen.	πατρός $<$ - r - $\acute{o}s$	*mņt-éi-s

This idea was brought to the fore by Pedersen, Cinq. décl. 23-5, but even he was sceptical with regard to the possibility of establishing this more accurately. In Notes on Vedic noun-inflexion (pp. 1-70), Kuiper worked out the theory, in which form it is used here.

In the individual languages this original system has been simplified in various ways. Traces of ablaut both in the stem and in the suffix are, however, so frequent

[&]quot;Güntert, *Indogermanische Ablautprobleme*, Strassburg 1916, hat die in jeder Beziehung verfehlte Benennung Schwa secundum (schöne lateinische Orthographie!) eingeführt" (Pedersen, *Hitt.*, p. 161, n. 1).

that they cannot be denied, any more than the existence of the two paradigms given above. Consequently I do not see objections of a general nature. Kuiper has found numerous indications of the correctness of the theory in (mainly) Indo-Iranian. But further research, which is urgently required, has not been performed.

A group of Greek forms which can be combined in this way into a paradigm consists of λειμών (-ῶνος), λιμήν (-ένος), λίμνη; see Frisk, II, pp. 97 ff. These forms seem to originate from a hysterodynamic inflexion:

```
sg. nom. *leim-ón
acc. *leim-én-m
gen. *lim-n-ós
```

For $-\delta n$ -énm cf. Nerio -enem and Lith. piemuõ piemenį. From this *leim δn will first have been detached (with the nominative as stem); then within the newly formed *leim δn *leim δn *leimen δn *leime

The forms δώτωρ -ορος and δοτήρ -ῆρος could point in the same way to one original paradigm:

```
*deħ<sub>3</sub>-tór > *δωτώρ
*deħ<sub>3</sub>-tér-ṃ > *δωτέρα
*dħ<sub>3</sub>-tr-όs > *δοτρός
```

With o-vocalism of the suffix the form δώτωρ has the full grade of the root like λ ειμών; δοτήρ has e-vocalism of the suffix with zero grade of the root, like λ ιμήν. That the two forms derive from one paradigm is perhaps confirmed by Lat. dator, which connects the zero grade of the root with the o-grade of the suffix. (The zero grade of the suffix in Skt. dātrė dātṛṣủ.) Cf. βώτωρ βοτήρ. The same distribution is also found in ἀλέκτωρ (δ 10) ἀλκτήρ (II. Od.): *h₂lektór *h₂lektérṃ *h₂lktrós? The fact that the nominative has full grade may be the cause of the stress of the forms having been shifted back from -τωρ. Without ablaut in the root one finds ἰάτωρ ἰητήρ (Myc. ijate) ἰατρ-. The type of ῥήτωρ ῥητήρ may be based on ablaut *μreh₁-/*μṛh₁-. Cf. δμητήρ as against (παν-) δαμάτωρ, which may stand for *δεμάτωρ (*dṃh₂-/demh₂-).

(3) Greek has many words of non-Indo-European origin. Often discussion is seriously hampered by the fact that elements are brought into it which are of foreign origin. This can also be encountered in Frisk's dictionary. It is therefore of great importance that more systematic research be performed on this point. The language (or languages?) from which these words must have been taken are referred to as 'pre-Greek', 'pre-Hellenic' or 'Mediterranean'. The last term then means that this language may have cognates in other regions in the Mediterranean basin. In this book we shall mainly confine ourselves to 'non-Indo-European'. The term 'Pelasgian' will not be used, since it is bound up with the theory of the "Protoindogermanische Schicht", which I do not consider to be sufficiently reliable.²⁴

²⁴ This theory is defended above all by Georgiev, Van Windekens and Carnoy. See for instance Van Windekens, *Etudes pélasgiques*, Louvain 1960. A study of the testimonia on the Pelasgians may be found in Lochner-Hüttenbach, *Die Pelasger* (Vienna 1960).

Among the formal criteria of this language special reference may be made to the procedure of prenasalization. This term indicates that, besides forms with occlusive, cognate forms occur with nasal in front of the occlusive, e.g. σαλάβη: σαλάμβη, κυβιστάω: κύμβαχος; κολύφανον: κολύμφατος; κιδάφη: κινδάφη, Διδυμήνη: Δινδυμήνη; αἴγιθος: αἴγινθος, ἀσπίθιον: ἀψίνθιον; κίχραμος: κύγχραμος, θάλασσα: δαλάγχαν.

In addition some words seem to have been derived from a Central European language, since they have related forms in other Indo-European languages in Europe (mostly Balto-Slavic and Germanic), but seem to be non-Indo-European. It is not always possible to distinguish between these two groups — assuming the fundamental correctness of the theory; this book does not go into this matter, since it is of no further importance here.

D. OBJECTIVE AND SET-UP OF THE WORK

The objectives of this work are:

- (1) to verify on the Greek material the correctness of the starting-points stated above (p. 8) as regards the laryngeal theory;
- (2) to demonstrate the need for assuming a third, o-colouring laryngeal for the proto-language;
- (3) to study all Greek developments of the laryngeals and groups with laryngeal. The treatment of the material appears from the table of contents. This purely formal arrangement proved to be the most appropriate one from a methodical point of view. The first chapter on the "prothetic vowel" forms a self-contained whole that leads to obvious conclusions. This is reinforced by the treatment of the negative adjectives with vn- vω- (which in turn form a parallel of part of the problem of the disyllabic roots, which is dealt with in the last chapter) and Attic reduplication; the latter points ahead to the first chapter of the third part (ch. VI: After vowel before consonant). More difficult to demonstrate is initial laryngeal before vowel. The development at the end of the word is more troublesome, since in this case more allowance has to be made for the effects of analogy. Of course the third part is more complicated, since in this allowance has to be made for both the preceding and the following sounds. The developments discussed in chapters VI to X of this part, which in general are of less importance, are difficult to demonstrate. Far and away the trickiest problem is that of the disyllabic roots, which at the end is considered as a whole. This is followed by a short study of possible dialectal differences. In the last part the results are summarized and placed in a wider context, following on the general remarks in the introduction. As this survey shows, there is a close connection

²⁵ Various cases of this have been collected by Ch. Autran, *Tarkondemos*, Paris 1922, pp. 83-6. The examples given here are taken from Kuiper, Μνήμης χάριν.

between the various parts of the book. The work must therefore be regarded and appraised as a whole.

It should finally be remarked that not all the theories that have ever been published are discussed. Many of these have been conclusively refuted by Cowgill (pp. 160-80).

THE GREEK MATERIAL

	b.	

LARYNGEAL AT THE BEGINNING OF THE WORD

I. BEFORE CONSONANT

A. THE 'PROTHETIC VOWEL'

1. Introduction

a. The Problem

Greek has a number of words beginning with a vowel which in cognate forms in the other IE languages is missing. On the strength of the assumption that this vowel was added in Greek, it was given the name of 'prothetic'. This nomenclature will continue to be used in the following because this term is current and easy, even where it would be incorrect, strictly speaking.

The assumption has been voiced that this prothetic vowel arose from vocalization of a PIE laryngeal. This can therefore only have been the case with inherited IE words. However, it is known that not all prothetic vowels belong to the same group. A distinction should be made between:

- (A) prothesis of possible IE origin; if a word is to be regarded as belonging to this group, an IE etymology is necessary;
 - (B) prothesis of a different origin:
- (1) prothesis in words of non-IE but pre-Hellenic or Mediterranean origin; e.g. ἀσταφίς ὀσταφίς σταφίς 'dried grape', which cannot be separated from σταφυλή 'grape', has no IE etymology and whose stem (stabh-) seems non-IE;¹
- (2) more recent prothesis, consisting of i before consonant group beginning with s, in late Greek in or near Asia Minor, e.g. ἰστήλη, ἰστρατιώτης; Schwyzer, 413. This does originate from non-Greek speakers.²

Perhaps related to the latter group is ἐξατράπης Theopomp. and (ἐξαιτραπεύω) in Carian inscriptions (as against σατράπης X., σατραπεία Hdt.) from *xšaθrapā-, cf. OP xšaçapāvan-.

It will be clear that where a convincing etymology is lacking, only considerations on the structure must decide whether the word is IE or a loan-word from a Mediter-

- Lit. Kretschmer, Einleitung, p. 422, Glotta, 21 (1933), 86-92; Bertoldi, Riv. Fil. Class., 60 (1932),
 345, n. 1, ZRPh, 57 (1937), 158 f., Mél. Van Ginneken, p. 169; Belardi, Rendic. d. Lincei, sc. mor.
 X (1955), 317 f.; Kuiper, Μνήμης χάριν, p. 221.
- The phenomenon is already found in Hittite, *išpant-*, *ištantanun*, *išhai*; Kronasser, *Vgl. Laut-u. Formenlehre d. Heth.*, p. 29f; *Evidence*, p. 27, n. 123. For Armenian see Meillet, *Esquisse*², p. 53 (st-> əst-). The same is found in Turkish: *iskelet*, *istasyon*, *istatistik*, *isterilize*. In Phrygian a prothetic *i* is very uncertain, see Haas, *Phr. Spr.*, p. 215f.

ranean language. In general, however, this is the only way in which the latter group can be identified, since the possibility of an etymology is practically out of the question as long as we do not have a good knowledge of a relative of this substratum language. Thus fundamentally there remains a moment of uncertainty for the individual cases. The last group (B2) is by definition easy to recognize.

Within the words that belong to group A a distinction should be made between two cases. We have:

- (1) α , ϵ , o before $\rho \lambda \mu \nu_F$ and sometimes other consonants;
- (2) ι before groups of guttural + dental.

In addition there is a second distinction; while in Armenian words with a prothetic vowel correspond to the first group (*infra*), Armenian has no prothetic vowel beside the second group. This group consists of only a very few words which may be listed here.

ἴκτινος (Sch. II. Oxy., Choerob.), ἰκτῖνος (Hdn.) 'kite' (Semon., Theogn., S., Hdt.): Arm. *çin*.

ἴκτις (ἰκτίς) 'marten' (Ar., Arist.) as against κτιδέη (κυνέη Κ 335. 458). Here Maas, KZ 60 (1933) 286, has suspected an incorrect split from κρατὶ δ'ἐπ' ἰκτιδέην κυνέην; the same explanation is given by Leumann, Hom. W. 53 f.

 $i \chi \vartheta \delta \varsigma$: Arm. jukn (with -kn as in mu-kn: μδς), Lith. žuvis.

The laryngeal theory cannot, in principle, offer any solution for the latter group, since in vocalization the three laryngeals gave ε , α , o. It is not inconceivable *a priori* that an ε ($< \hbar_1$) was assimilated to ι (Schwyzer, p. 256), but this would not explain why Armenian has no vowel there.

A few observations impose themselves. Ἦτις has no etymology; nor is it certain that there is any question of prothesis here. The two other words have the ι before the phoneme k^s or $\hat{g}^z h \, (*k^s \bar{\imath} no-, *\hat{g}^z h u \bar{h}-)$. And yet it is improbable that this is in itself the cause of the phenomenon, for one does not have it in κτείνω κτάομαι and χθών χθές. Ἦφθιμος might be important here, if this belonged with φθάνω and Skt. $k \bar{\varsigma} a y a t i$ (lit. in Frisk s.v.).

Associated with the above cases is perhaps ἴκταρ (Call.) : κτάρα· ἰχθῦς βραχύτερος πάντων Hsch. : ἀκτάρα (Sch. Opp.), where the changing form and the meaning point to non-IE origin.

We shall therefore confine ourselves in what follows to group A 1, prothetic vowel α , ϵ , o before $\rho\lambda\mu\nu_F$ and sometimes before another consonant.

b. Prothetic Vowel elsewhere

Besides the prothetic vowel in Greek we find the same phenomenon in Armenian, which will be discussed in the following section, while usually Albanian is also mentioned. Further the Phrygian and Macedonian material should be discussed. The prothetic vowel which Harl, KZ 63 (1936) 19, believes to have found in Iranian, i before ri-, u before ri-, has nothing to do with the Greek and Armenian phenomenon. Albanian. — Hamp, AION 2 (1960) 185-90, has disclaimed the existence of the

prothetic vowel in Albanian. He points out that the unstressed short initial vowel in this language disappeared in post-Roman times, mik < amīcus, peshkēp < episcopus, $sy < *ok^ui-ōu$ (? cf. Gr. ŏσσε, Arm. $a\check{c}-k^c$, OCS $o\check{c}i$, PIE $*ok^u\bar{\imath}$).³ In addition l intervocalically became ll, but the words that correspond to the Greek prothetic vowel before λ have l-, lig 'bad, thin, sick': ὁλίγος, lyej 'to smear': ἀλείφω, le(h) 'light' if connected with ἐλαχύς ἐλαφρός. The fact that ll- was preserved in this position is shown by Geg. $llān\check{e}$, Tosc. $ll\check{e}r\check{e}$ 'arm from elbow to hand' (ὡλένη, PIE $*\check{o}len\bar{a}$). Nor does one find a prothetic vowel in nyeri 'person': ἀνήρ, myel 'to milk': ἀμέλγω, nlp 'nephew, grandson': ἀνεψιός, $n\check{e}nd\check{e}$ 'nine': ἐννέα. Next he demonstrates that the three forms cited as evidence of a prothetic vowel must be explained otherwise, im 'my': ἐμέ, Geg. $\hat{a}nd\check{e}rr$, Tosc. $\hat{e}nd\check{e}rr\check{e}$ 'dream': ὄνειρος, Geg. $em\check{e}n$, Tosc. $em\check{e}r$ 'name'⁴: ὄνομα. He believes that im, ὲμέ, etc., is a separate case that is not on a par with the other cases of prothetic vowels, which seems correct to me; cf. p. 43. Having regard to the d, $\hat{a}nd\check{e}rr$ will stem from $*\hbar_3on_r$ ($*\hbar_3en_r$, ὄναρ; cf. p. 46). For $em\check{e}n$ see p. 47 s.v. ὄνομα.

I consider it to have been convincingly demonstrated that Albanian has nothing that corresponds to the Greek prothetic vowel. Consequently *erë* 'darkness' will not correspond to ἔρεβος either.

Phrygian. — LPhryg. *anar* may be a direct representation of $*\hbar_2 n\bar{e}r$ (IE $\bar{e} >$ Phr. a, cf. *matar*; Haas, *Phr. Spr.*, p. 202), but the context (Haas, *ibid.* p. 106) does not give any certainty for this interpretation.

Even more difficult is OPhr. onoman. The word occurs on the Arezastis inscription from the sixth century, so that it is not very probable that this word was borrowed (from Greek), which in any case would be surprising for this word. (Phrygian has another word ending in -ma(n) (<*-m η) in OPhr. keneman, LPhr. knouman.) The words are divided here by dots. From the context, the following daxet is probably 'fecit', but the preceding ... evet eksetiz: ovenin: is too uncertain. The basic form is unclear. If the first or the second o were to go back to \hbar_3 (the o is short, for IE \bar{o} is written Phr. ou or ω , op. cit., p. 203), this would presuppose $\hbar_3 > o$ and $\hbar_1 > e$ for Phrygian. In accordance with this would be the etymology of OPhr. keneman as *kenəm η from *k(h)en \bar{e} - (i.e. *k \hbar_1 en \hbar_1 -/k \hbar_1 ne \hbar_1 -) in Skt. khanati khanitum 'to dig', khani- 'mine, pit, quarry'. This development ∂ (\hbar_1) > e is at variance with Haas' ∂ > a (p. 204), but this word is not discussed by him there. However, two things argue against this assumption. The form daket, ad(d)aket seems to correspond to

 $^{^3}$ Greek often has the stress on the prothetic vowel (ἔρεβος, ὄνειρος), which has not yet been explained. It must be an innovation.

⁴ I cannot guarantee the correctness of these forms, since they are written differently in different manuals (Hamp's notation is not consistent either). Frisk seems to have interchanged 'geg.' and 'tosk.'. One also finds Geg. êmen êmën, Tosc. ëmër.

⁵ It does not seem probable that LPhr. knouman is a development of OPhr. keneman. As ou may go back to PIE \bar{o} , a variant form *kh1noh1-mn seems obvious. If this is correct, the two forms will point to paradigmatic ablaut. An older form (occurring once) is kinouma (with i, = e, from h_1 ?). However, in Greek inscriptions one sometimes finds it reproduced by κένωμα (through secondary association with κενός?), so that k(i)nouma may have developed under the influence of κένωμα.

Lat. fac-, i.e. to go back to $*dh\hbar_1k$ -. However, it is conceivable that Phr. dak- has the full grade $*dhe\hbar_1k$ -> $*dh\bar{e}k$ - (with $\bar{e}>a$, supra), as is probable for dakar, dakaren 'fecere, fecerunt'. The form detoun, which Haas reproduces by 'fito' (ibid., 104), could have $*dh\hbar_1$ -> de-, but the context is too uncertain. If vrekuntedatoz contains a second element -datos 'given', one would have da- from $*d\hbar_3$ -. However, this interpretation is highly uncertain: the text (the Arezastis inscription) seems to have punctuation after the n, although this is not certain; furthermore, the first element (which would have to be the name of a god) is not known (the v- prohibits the connection with Berekuvt-). If it is in fact a name, allowance must also be made for the possibility of strange (perhaps Iranian) origin. At present, therefore, certainty is not possible, but keneman continues to carry weight. Phrygian noman could in that case also go back to noman (cf. p. 229 f.).

The cases of prothetic vowel mentioned by Haas (*ibid.*, p. 220: *olavos*, *evet*, *ovevin*) are not reliable, since the interpretation of these words is too uncertain. In *oouitetou* 'videto' the group *oou*- can be simply an indication of the bilabial *u*.

Macedonian. — Ἀβροῦτες ὀφρῦς. Μακεδόνες Hsch. is clear, if the gloss is reliable. Recent discussion in J. N. Kalleris, Les Anciens Macédoniens (Athens, 1954), I, pp. 77 ff. Further material, however, is not known to me. If the interpretation of ἀβροῦτες is right, we would find here a prothetic vowel, but — otherwise than in Greek — with $a < \hbar_3$.

c. The Armenian Prothetic Vowel

Armenian is the only language which, like Greek, has forms that have a vowel as the first phoneme that is absent from the other languages. This phenomenon largely occurs in the same words as in Greek.

G. Royen, Handelingen van het Zeventiende Vlaamse Filologencongres, pp. 83 f., denies, in my opinion wrongly, that this is of significance to PIE. Admittedly, in general it is correct that identical phenomena in different linguistic groups do not necessarily go back to the proto-language, but here in my opinion a parallel development is out of the question. Royen points out that prothesis is an Armenian phenomenon. The first phoneme of the PIE groups tr-pr- was lost, after which the r-acquired a prothetic vowel ($erek^c$ 'three' — Skt. $tr\acute{a}ya\dot{p}$; $erastank^c$ — $\pi\rho\omega\kappa\tau\acute{o}\varsigma$). On the other hand the l- from PIE pl- remained without prothesis (luanam 'to wash' — $\pi\lambda\acute{o}v\omega$, Skt. $pl\acute{a}vate$). In the groups dr-gr- bhr-sr- metathesis occurred and the r-acquired a preceding vowel, dr-> rt-> art- ($artasuk^c$ < *drak(r)u- $\delta\acute{a}\kappa\rho\upsilon$, OHG trahan), gr-> rk-> erk- (erkan 'mill' — Skt. $gr\ddot{a}v\ddot{a}$), bhr-> rb-, which with dissimilation became lb- and with prothesis e|alb- (elbayr — $\varphi\rho\acute{a}\tau\eta\rho$, albiwr 'well' — $\varphi\rho\acute{e}\alpha\rho$), sr-> rs- $> \dot{r}$ - $> a\dot{r}$ - ($a\dot{r}u$ 'canal' — Skt. sruti-). Even the r- of loan-words acquired a prothetic vowel, erank' 'thigh' — Av. erana-.

Against this it must be posited in the first place that Lazzeroni, Ann. di Pisa II 27

⁶ The same phenomenon is found in Ossetic, tr- ϑr -> $\ddot{a}rt$ -; br-> $\ddot{a}rw$ -, $\ddot{a}rf$ -; sp-> $\ddot{a}fs$ -; e.g. $\ddot{a}rt\ddot{a}$ 'three'; $\ddot{a}fsad$ 'exercise' — Sogdian spad.

(1958) 127-37, has pointed out that the prothetic vowel for Arm. $r - \langle tr - \text{must} \text{ have} \rangle$ come into being after fixation of the Armenian accent on the penultimate, in view of eris, Goth. prins (which otherwise would have been *ers, Meillet, Esquisse², p. 19), while the prothetic vowel that corresponds to the Greek one dates from before that time, $ayr - avh\rho$, with loss of the last syllable after the stress. It emerges from this that the two prothetic vowels are of different origin and that the vowel corresponding to the Greek one is the older of the two.

But, even apart from this, Royen's argument does not detract from the importance of the forms with prothetic vowel that correspond to Greek ones. Firstly these are not exclusively words with a prothetic vowel in front of r and secondly there is a clear correspondence between the Armenian words with and without prothetic vowel and the Greek ones. Compare the following (leaving aside the cases with r):

ałk ^c at	ὀλίγος	as against	loys	λευκός
ałuēs	ἀλώπηξ		loganam lk ^c anem	λούω λείπω
anicanem	ὄνειδος	as against	nor	νε(ϝ)αρός
anurj	ὄνειρος			
anun	ὄνομα			
ayr	ἀνήρ			
inn	ἐννέα			
atamn	ὀδών	as against	tasn	δέκα

There seem to be a few exceptions. For instance meg — ομίχλη and mez, mizem ομείχω. Austin, Lg. 17 (1941) 83-92, considers them both to be loan words from Persian, which may be correct; cf. Hübschmann, p. 474. As examples of the opposite olok' and amis are stated. Olok' 'shinbone' is connected with λοξός 'slanting, crosswise', which semantically is not convincing. Nor is there an obvious relation between λοξός and Lith. alkū́nė, Russ. lókotь (<*olkъt-) 'elbow'. Fraenkel connects alkū́nė with ἀλένη. Cf. also p. 20. Amis 'month' — μήν is, however, obvious. It has been suspected that the a was taken over from arev 'sun' and astl 'star' (Winter, Evidence, p. 29). One could further think of the influence of am 'year', amarn 'summer', awr 'day'. That amis is recent becomes probable through the following considerations. Beside the stem *mēns-(Gr., see Frisk; Lat., Celt.; Ind.-Ir.?) the forms *mēnes-(Lith.) and *mēnōt- (Germ., Balt.) existed. The Armenian form cannot stem from the latter group, for then the -s could not be explained. This must go back to -ns (Meillet, Esquisse², p. 39). But the form *amēnsos posited by Hübschmann (Arm. Gr. I 417) and Meillet nowhere finds support. It might seem likely that the basic form was *amēns, partly in view of the correspondences between Armenian and Greek and Indo-Iranian. However, this is impossible, since in that case the Armenian stress would have fallen on the prothetic vowel (supra) and the vowel of the second syllable would have disappeared (*amēns > *ams, cf. *anēr > ayr). Thus the basic word was *mēns > *mis, with a 'prothetic' vowel of more recent date than the others and thus of different origin. S. E. Mann, Armenian and Indo-European, p. 19, explains amis as am-mis 'month of the year', by way of distinction from mis 'meat' (from PIE *mēms-, Skt. māms-).

Recently Szemerényi, Syncope, p. 112, repeated the counter-examples of Kuryłowicz, Apophonie, p. 270, viz. $jukn - i\chi 9 \circ \varsigma$ and $k^{\varsigma}san - * \mathring{\epsilon}_F \mathring{\epsilon}_K \circ \sigma \iota$. However, both are irrelevant. The first belongs to another group, as seen above (p. 19). As regards the second, it must be borne in mind that Armenian never has a prothetic vowel before ψ , cf. $\mathring{\alpha} \circ \sigma \alpha$: gom. Here, therefore, Armenian has a different development from Greek; cf. p. 76. See moreover for $*\mathring{\epsilon}_F \mathring{\epsilon}_K \circ \sigma \iota$ p. 60 ff. and p. 76 ff. It should be noted that there is no certain case of prothetic vowel before m either, as far as I can see.

These counter-examples are not strong enough to dispute the principle. The fact of the correspondence between Greek and Armenian remains and is so striking that common origin is an inescapable conclusion. Influence of a substratum or "inherited Indo-European speech-habits" (Szemerényi, *loc. cit.*) alone cannot explain the occurrence of these exact resemblances. In anticipation of what follows it must, however, be admitted that the question remains why precisely Greek and Armenian have vocalized the PIE laryngeal in this position. Here the influence of a substratum cannot be excluded; cf. p. 18 n. 1. But this is something fundamentally different from explaining the prothetic vowel directly by the phonetic laws of a substratum. The matter must be further left out of consideration here.

d. Attempts at an Explanation

So far, if we except the explanation with the aid of the laryngeal theory, the socalled prothesis has not been adequately explained.

The explanation has been sought in "verfrühtes Einsetzen des Stimmtons im Satzanlaut (oder ähnlich)", Schwyzer, p. 412.

Another very widespread idea is that these are sandhi vowels, developed between consonants in the whole of the sentence.

Neither of the two, however, can explain the correspondence with Armenian nor elucidate the appearance of ε and o as well as α . The well-known formulation by Meillet, BSL 27.130, "résonance de timbre vague qui ne s'est précisée que peu à peu", does not explain why now this vowel appears and then that one. Another argument against the theory of the sandhi vowels is that such a vowel is not found in words of exactly the same structure as those that have that prothetic vowel. Moreover, Winter, Proth. Vok., p. 2, is correct in his objection that Greek laws concerning word end greatly reduce the chance of difficult combinations of consonants. If one assumes, as one is compelled to do and as the correspondence with Armenian would also indicate, that these 'prop-vowels' date from before the effect of these laws, then these vowels had to be preserved despite the fact that the groups in which they arose disappeared, which is after all most improbable. Moreover, the prothetic vowel is found in by far the largest number of cases before sonants $(r \mid m \mid n \mid p)$, and much less before other

consonants, rarely before groups of consonants (only ὀφρῦς). Compare also the criticism of the theory of Adrados, p. 29 f.

Meillet's idea (*l.c.*) of also regarding the ε at the place of the reduplication of the perfect in ἕκτημαι, ἔζευγμαι as a prothetic vowel (which for instance is still found in Chantraine, *Gr. Hom.*, p. 422, *Morph.*², pp. 187f.) seems to me entirely incorrect. It is surely evident that in these cases the ε has the function of reduplication, and so is a functional element, which the prothetic vowel is not.

On the other hand substratum influence has been envisaged and it has been pointed out that Hittite, Lycian, Lydian, Armenian and Turkish never have an r at the beginning of the word. However, it seems to me of importance that Greek does have $\hat{\rho}$ -, albeit mainly from sr- or ur-. Cf. Frisk s.v. 2. $\hat{\rho}$ έζω and $\hat{\rho}$ υκάνη: he is surprised at the absence of a prothetic vowel. For in Asia Minor the substratum is believed to have made its effect felt down to Turkish. Further, the prothesis is not found only in front of r. Cf. p. 22.

IE 'prefixes' have also been envisaged. Evidently composition is meant here. There originated from PIE sm-, the zero grade of *sem- (in Skt. sám 'together', Gr. εἶς), with the meaning 'one, the same (ὁμός)', in Greek &- which is found in ἄπαξ (Lat. sem- in simplex, Skt. sa- in sánāman) etc.; by breath dissimilation this became &- in ἄλοχος ἀδελφ(ε)ός, from which &- was extended, ἄκοιτις ἀγάστωρ ἀετέα, Schwyzer, p. 433. Perhaps the Aeolian development of *sm- is d- in ὅπατρος ὅτριχες (pl.) ὀγάστωρ ὄζυξ οἰέτεος.

In all the words mentioned the meaning is clearly recognizable. This becomes more difficult where α- is supposed to have only an intensifying effect, the so-called 'α *intensivum*'. Here the examples are fairly scarce and in my opinion highly dubious: ἀσπερχές ἀστεμφής ἀπρίγδα ἀπτερέως ἀτενής ἀτραπός ἀφλοισμός ἀχανής.

Another prefix is \mathring{o} - 'close to, towards, with', for instance \mathring{o} κέλλω \mathring{o} ζος \mathring{o} σχη. This is compared to the (unrelated?) Skt. \bar{a} , \bar{a} -gam- 'to arrive'. As \mathring{o} ζος is related to Goth. asts, PIE o- has been demonstrated, if at least the analysis *o-sd-, parallel to ni-sd-in Lat. nīdus, OHG nest, is correct; that for *osd- is, however, much less obvious. If Hitt. hasdueir 'branches' belongs to this, o- has originated from \hbar_3e - or \hbar o-. For \mathring{o} σχη 'vine-branch with grapes' the connection with \mathring{o} χ-εῖν is "semantisch alles andere als einleuchtend" (Frisk). Then only \mathring{o} κέλλω 'to run (a ship) aground, on shore' (Hdt.) would remain against κέλλω (Od. and Tragg.). The following are also mentioned as examples of this prefix: \mathring{o} αρ \mathring{o} ψον \mathring{o} τρύνω, Schwyzer, p. 434.

For an element $\hat{\epsilon}$ - there are no indications except in two words, $\hat{\epsilon}\chi\vartheta\dot{\epsilon}\zeta$ (: $\chi\vartheta\dot{\epsilon}\zeta$) and $\check{\epsilon}\nu\epsilon\rho\vartheta\epsilon$ (: $\nu\dot{\epsilon}\rho\vartheta\epsilon$ etc.). In the case of the first the $\dot{\epsilon}$ - is probably not the same as the prothetic vowel, since it stands in front of a group of consonants (of two occlusives, as against *muta cum liquida* in — exclusively — $\dot{\delta}\phi\rho\bar{\nu}\zeta$) and because the forms with and without $\dot{\epsilon}$ - occur side by side. This $\dot{\epsilon}$ - is, I think, the deictic particle that also occurs in $\dot{\epsilon}\kappa\epsilon\bar{\iota}$ (: $\kappa\epsilon\bar{\iota}$), etc.; see Frisk I 475. In the case of the second it is noticeable here that Armenian has no prothetic vowel, $nerk\dot{\iota}$ "inférieur, der untere".

However, there are two general and overwhelming objections to the explanation of

the prothetic vowel by these 'prefixes'. Firstly, despite the fact that α , ϵ and o could all have originated in this way, it still does not become clear why α , ϵ and o appear as equal elements in the prothesis. The relation of the 'prefixes' mentioned is quite a different one.

The second point is that the elements discussed have an obvious significance, and so are or were functional elements. In $\dot{\alpha}$ -/ $\dot{\alpha}$ - the meaning 'the same' is entirely clear, and the value of the deictic $\dot{\epsilon}$ - can likewise be demonstrated. Less clear are $\dot{\alpha}$ -($\dot{\alpha}$) and the ' α intensivum'. However, it should be remarked in this connection that the cases where it is thought that these are recognized are few in number (and should perhaps be explained in another way) and that these are precisely not the cases that are regarded as instances of prothetic vowel. It seems improbable that these vowels originated by composition with elements conveying a meaning. There is nothing to show that these words differ in meaning from related words in the other IE languages ($\ddot{\epsilon}$ ρεβος $\dot{\epsilon}$ ρυθρός $\dot{\epsilon}$ λεύθερος $\dot{\epsilon}$ λίγος $\dot{\epsilon}$ νειδος $\dot{\epsilon}$ μέλγω). Moreover, these $\dot{\epsilon}$ - and $\dot{\epsilon}$ - are found before groups of consonants, occlusives and vowel ($\dot{\epsilon}$ αρ), while the prothetic vowel occurs mainly before sonants. It would further be quite a coincidence if three prefixes were to have become meaningless elements precisely in Greek — quite apart from the parallel with Armenian.

Two recent attempts at an explanation by means of 'prefixes' will be further discussed.

e. The Prothetic Vowel from en/n according to Seiler

In a penetrating article, KZ 75 (1958) 1-23, Seiler defends the old hypothesis that the prothetic vowel α- stems from *η-, which is the zero grade of *en 'in'. On p. 2 he gives a survey of the etymologies that are based on this assumption: ἀσπάζομαι, Lagercrantz; ἀλέγω, Schulze; ἀκέομαι, Brugmann; ἀγείρω ἀγοστός, Solmsen; ἀκαρός, Schulze; ἄζα, Fraenkel; ἀπέλλα, Solmsen; ἀλία, Solmsen; ἀτενής, ἀχανής, ἀστεμφής Solmsen (who rejected it).

He takes as the criterion "enge und häufige Beziehung zu der 'Präpositio' èv" and considers as the clearest case:

```
άκαρός : κάρα = ἐγκέφαλος : κεφαλή 
 ἀκαρός = ἔγκαρος (cf. ἴγκρος).
```

Apart from the fact that ἀκαρός is known only from the *Etymologicum Magnum* it is the question whether the late ἔγκαρος (AP, Lyc.) is of much value to this problem. Ἰγκρος (Hsch., Hdn.) with zero grade -κρ- seems rather to be an old formation, but is precisely without n.

It is useful further to study the examples discussed by Seiler.

His solution may be correct for ἀτενής 'stretched, intense, intent'. As against

⁷ See Frisk s.v. As κάρ $\bar{\alpha}$ contained a laryngeal, this must have disappeared in composition, *en- $\hat{k}rh_2$ -o-> *en $\hat{k}ro$ -; cf. p. 242.

the usual derivation of å- from *sm- with Ionic psilosis he states that the word cannot be demonstrated in Ionic (Hes., Pi., Tragg., Ar., Pl.). Parallels are ἔντονος (Hdt., E., Thuc.) 'intense, eager, vehement', young is ἐντενής (A.R. 2.933); ἐντείνω (Hom.) and Lat. intentus.

The situation is different with $\mathring{a}\lambda \acute{\epsilon}\gamma \omega$. Explaining the word as * η -leg- he tries to separate this root from that in $\lambda \acute{\epsilon}\gamma \omega$, Lat. lego and connect it with Lat. neglego, Alb. plog($\ddot{e}t$). Szemerényi, Syncope, pp. 144-60, points out that Alb. plog($\ddot{e}t$) 'lazy' cannot be taken with these on account of its meaning (from *legh- 'to lie', Russ. ležaka 'lazy person', etc.). Nor does it do to separate lego from neglego. This by-way is all the more strange because Seiler's basis for the analysis of $\mathring{a}\lambda \acute{\epsilon}\gamma \omega$ as * η -leg- is the use with $\mathring{\epsilon}v$, just as $\mathring{\epsilon}v$... $\lambda \acute{\epsilon}\gamma \omega$ 'to reckon, count', in Alcm. fr. 1.2 P $\mathring{\epsilon}v$ καμοδοιν $\mathring{a}\lambda \acute{\epsilon}\gamma \omega$, Pi. O. 2.78 $\mathring{\epsilon}v$ τοῖσιν $\mathring{a}\lambda \acute{\epsilon}\gamma \omega$ νται beside Γ 188 $\mathring{\delta}$ 452 $\mathring{\epsilon}v$... $\lambda \acute{\epsilon}\gamma \omega$. On the strength of this comparison Seiler postulates "beachten, berücksichtigen" as the meaning and sees himself obliged to separate $\mathring{a}\lambda\gamma \circ \varsigma$ from the verb (a form which would be formally difficult to explain in that way: * η lg-?).

There are insurmountable objections to this interpretation. The chronology of the data indicates that ἀλέγω ἐν (Alcm., Pi.) is more recent than the other ways of use (Hom.). After Homer ἀλέγω occurs only rarely (Alcm., Simon., Pi., A. and the Hellenistic poetae docti, Call., A.R.). In fact the locution ἀλέγω ... ἐν is difficult to explain from Homeric use; the meaning would have to be completely blurred. The impression is rather gained that this is a scholarly reinterpretation (in fact ἐν ... λέγω with the "more learned" form ἀλέγω). Furthermore, Seiler's interpretation does not explain the frequent occurrence in negation (ten times against twice without in Homer, as Seiler himself remarks). The meaning 'trouble oneself about', on the other hand, calls for negative use; ἐμπάζομαι, which has the same meaning, occurs eight times out of ten in negation in Homer (the exceptions being α 271 ~ 305); cf. Οὐκαλέγων Γ 148, and νηλεγής, p. 99 f. Finally, the separation of ἄλγος is difficult to accept. Cf. p. 39 f.

His analysis of $\mathring{a}\lambda \mathring{i}\gamma \kappa \mathring{i} \circ \zeta$ as * η -link-, in which *link- is claimed to be a substantive for 'face', as in ἕναντα, is not convincing. The etymology with OCS lice 'face' would presuppose a form * $l\bar{i}nkom$, but then the connection with OIr. lecco 'cheek' (Berneker, Slav. etym. Wb., p. 720) would have to be abandoned, which is not to be preferred. Nor do the speculations on the relation of ἐναλίγκιος to ἀλίγκιος inspire confidence (dative +en+link- as against $\eta+link$ - + dative, on the strength of the fact that ἀλίγκιος occurs only before the dative (twice) and ἐναλίγκιος only (twenty times) after the dative).

The explanation of $\ddot{\alpha}\mu \circ \tau \circ \nu$ as *η-mη- is untenable, since it would presuppose $\eta > \alpha$ and $\eta > 0$ in the same word; this seems to have escaped the author's notice. This demolishes the argument based on the identity of the two words in the formula $\ddot{\alpha}\mu \circ \tau \circ \nu$ and the comparison with $\ddot{\epsilon}\mu\mu\epsilon\mu\alpha\dot{\omega}\varsigma$, which would thus demand the root *men- in $\ddot{\alpha}\mu \circ \tau \circ \nu$. Leumann's explanation of $\ddot{\epsilon}\mu\mu\epsilon\mu\alpha\dot{\omega}\varsigma$ (Hom. W., pp. 52 f.) as the result of a false split seems more plausible. Seiler's objection that E 143 $\mu\epsilon\mu\alpha\dot{\omega}\varsigma$

against E 142 ἐμμεμαώς proves that the poet was aware of the difference in meaning is something that I cannot share.

There are supposed to be more examples, but the author only mentions ἀσπάζομαι — ἐννέπω, Lat. *insece*. This connection is not convincing (one would expect instead * η -sek^u-: *en-sk^u-); the one with σπάω (with prothetic ἀ-), which Frisk still mentions, is even less probable.

Seiler has tried to give the formation a theoretical basis by comparison with the proclisis of prepositions. He asserts that besides loss of stress (Skt. $pariy\acute{a}si$ against $p\acute{a}ri\ yasi$, Gr. $\grave{e}\pi\grave{i}$ against $\check{e}\pi\imath$ in 'anastrophe') the proclisis initially also led to weakening of vocalism. In this way he explains Skt. api-:pi-, Gr. $\pi\imath\acute{e}\zeta\omega$; $\check{e}v\imath:ni-$, Skt. $n\bar{\imath}\acute{e}\acute{a}$ -, Lat. $n\bar{\imath}dus$, OHG nest < *ni-sd-. The zero grade *ni is claimed to be preserved in Lith. i. OCS v-.

This idea will be correct in principle, but little can be found in Greek that goes back to this phenomenon (for $\pi \iota \acute{\epsilon} \zeta \omega$ see Frisk, and cf. Kuiper, Nasalpr., Index). On the strength of the above one would also expect parallels in Lithuanian (with $\tilde{\iota}$ -) and Old Church Slavonic (with $\nu \acute{\epsilon}$ -).

It is clear that this cannot offer any explanation of the Greek prothetic vowel in general, since one would expect the same phenomenon in the other languages as well. Nor does one see why this $\dot{\alpha}$ - should have spread secondarily in Greek. In addition the exact correspondence with Armenian cannot be explained in this way, where η would probably have appeared as an-. From the study of the material (infra) it further appears that ϵ and o were about as frequent as α . This shows that η can present no solution for the problem of the prothetic vowel. Moreover, up to now there has only been one case for which the explanation proposed here can be made plausible ($\dot{\alpha}\tau\epsilon\nu\dot{\eta}\varsigma$). As, however, none of the other languages has such a formation elsewhere, this cannot be regarded as certain either.

To state that besides this explanation (and α privative (!) and copulative) another origin of the prothetic vowel remains possible, "von der wir vorläufig aber nichts wissen" (p. 3) — without even mentioning the laryngeal theory — is unscientific.

f. The Prothetic Vowel from n according to Winter

Winter too, after his treatise on the prothetic vowel that will be dealt with below, has endeavoured in Lg. 28 (1952) 186-91 to defend the origin of a- from p. He believes that he can reconstruct a PIE prefix p- 'together with' on the strength of material in Tocharian B. He finds here a prefix a(n)-, e(n)-, on-, the form of which is identical with the privative p, on the strength of which he postulates a PIE prefix p. In a manner not entirely clear to me he tries to determine the meaning, which he then puts on a par as a working hypothesis with that of Lat. co(n)-, Goth. ga-, etc. How he envisages the relation to p- does not become any clearer by the remark "that this prefix p- was sometimes used simply as a variant of en-" (p. 190).

Although I cannot assess the Tocharian material, I am in no way convinced that his interpretation is the only possible one. But it seems to me to be fundamentally

incorrect to trace back this phenomenon that evidently does not even occur in Tocharian A to PIE. In general Tocharian is not a language which, when it stands alone, allows of far-reaching conclusions regarding PIE.

The above author believes that he can find PIE η in $\alpha\gamma\epsilon(\rho\omega)$, which he tries to support by the semantic parallel

```
ἀγείρω: Lat. 'colligere': Goth. 'galisan' (ἄκαρος: ModG. 'Gehirn')
```

It may be asked whether $\alpha < p$ was also lengthened in composition, as in ὁμηγερής ὁμήγυρις (Hom.). In any case this one example — whatever it may prove — is not enough for assuming such a prefix. For the rest the same objections apply here as were made to Seiler's theory.

g. The Prothetic Vowel from Reduplication according to Winter

As the last person before Adrados, Winter devoted a special study to the prothetic vowel (Studien zum "prothetischen Vokal" im Griechischen (1950); with critical historical survey pp. 1-9). He regards the explanation of the prothetic vowel before sonants "als Ausdruck der Stimmhaftigkeit oder als Zeichen eines verfrühten Einsetzens des Stimmtons" (p. 2) as adequate and devotes no further attention to this group. He bases his own theory on the difference in length of the vowel of the root syllable as in $\Phi \bar{\alpha} \rho \alpha i$ $\Phi \eta \rho \alpha i$: A $\phi \alpha \rho \epsilon i \varphi$ and concludes that there must have been vowel shortening in 'prefixed' forms. It suffices — to employ his own method of criticism (of Wood, p. 6) — to cite his solution (p. 42): "Das Präfix vor gekürzter Wurzelsilbe ist entstanden aus einer doppelt dissimilierten Reduplikation der Wurzelsilbe". He summarizes this in the following scheme:

```
*kal-: *kal-k(a)l- > *al-k(a)l- > 1. *a\eta-k(a)l- 2. *ai-k(a)l- 3a. *aH-k(a)l- 3b. *a-k(a)l- *skal-: *ka-sk(a)l- 4. *a-sk(a)l-
```

Winter makes the following comment on this: "Dieses Unsicherheitsmoment, das jede Aussage 'Aus x muss y werden' unmöglich macht und nur eine Formulierung 'Wenn x nicht x bleibt, so kann aus x ein y oder y₁ oder y₂ usw. werden' erlaubt, und das auf den ersten Blick einen schweren Nachteil zu erhalten scheint, gibt in Wirklichkeit eine Lösungsmöglichkeit an die Hand".

I am not yet further than that "at first sight". The greatest objection — apart of course from the fundamental point that the "Ausnahmslosigkeit der Lautgesetze" is ignored here — is the dissimilatory loss of the initial consonant of the reduplication syllable. The reference (p. 44) to Schwyzer, p. 260, is not enough; there cases of a different kind are mostly concerned, which moreover are very rare. It is furthermore not clear how it happens that type 3b (and 4), which is the least probable, occurs the

most. It should be borne in mind that the type $\pi\alpha\phi\lambda\dot{\alpha}\zeta\omega$ καχλάζω, where thus the reduplicated consonant is still preserved, is in itself rare; Schwyzer, p. 647. Furthermore (the criticism is already to be found in Adrados, p. 326), the vocalism of the root in reduplicated and unreduplicated forms is usually the same (ἄσταχυς: στάχυς), while Winter's theory presupposes a reduced vocalism (not necessarily, although in that case his solution has nothing more to do with his starting-point). In addition one would expect the same timbre in prefix and root, which leaves many cases unexplained. Finally, many of his etymologies are disputable. He states "die einigermassen sicheren Fälle ... überhaupt nicht und stellt dafür möglichst unsichere Beispiele", Risch, Glotta 33 (1954) 209.

To explain $\dot{\alpha}$ - before a root with e-vocalism he calls in the aid of the laryngeal theory, though in a very strange manner: in the dissimilation of the consonants, besides the fact that the consonant can disappear entirely, a laryngeal can also come into being (in type 3b therefore He-CeC < Ce(C)-CeC?), which colours the e to a (p. 47); he thus starts here from the idea that all laryngeals colour to a or that only the a-colouring laryngeal could occur. The same idea may be found in the discussion of type 3a (p. 42): Skt. jāgarti < *geH-gor- < *ger-gor-. "Wichtig ist jedenfalls, dass es nicht absurd ist, mit einem Laryngal als Dissimilationsprodukt zu rechnen". However, it has not been demonstrated that this is not absurd, for this idea nowhere finds support and is by no means self-apparent (unlike the types $\pi\alpha\mu\phi\alpha\lambda\dot{\alpha}\omega$ and $\pi\alpha\iota\pi\dot{\alpha}\lambda\eta$).

Winter's thesis cannot therefore be taken seriously either as a contribution to the solution of the problem of the prothetic vowel or as criticism of the laryngeal theory.

h. Adrados' Theory

Building on his theory on the reduced vowels (*Emerita* 26 (1958) 249-309 and 27 (1959) 155-62), Adrados discusses in *Emerita* 27 (1959) 323-48 the cases with Hitt. *hu-, hu-w-*, which therefore definitely had laryngeal, and proceeds from

	PIE	H́и	Hu	beside	°Ни	$^{\circ}Hu$
which developed	Hitt.	þw-	þи-		hw-	þи-
	Gr.	F-	υ-		åF-	αὐ-
	Lat.	<i>u</i> -	<i>u</i> -		au-	au-

The laryngeal is not essential here, as he also expressly states: the 'prop-vowel' (°) can equally well develop before other consonants or before sonants (p. 329, 331). Here lies the weakness (and the strength) of this theory, which in fact is therefore that of Meillet (see p. 23 f.). Every unexpected initial vowel can be "explained" in this way. For the general objections to the theory of the 'prop-vowels' see p. 23 f.

Adrados has again summarized his views in *Estudios*, pp. 31-46. His starting-point makes discussion practically impossible; cf. p. xiv: "el concepto neogramático de ley fonética no es adaptable a nuestro material". See the criticism of Cardona, *Lg.* 39 (1963) 91-100.

His material is too disputable to be discussed here in detail. His first etymon (p. 37) may serve as an example: it connects ἑστία, ἄεσα (ἰαύω $<*Hii^\circ Hus\bar{o}$), ὧρος ἀωρέω (should read ἀωτέω) 'dormir' (con otro vocalismo de la raíz), and ϝάστυ ($<*Hu^\circ stu$).

The reconstructed °Hu- cannot explain the prothetic vowel. The 'prop-vowel' develops into a full vowel (as always and everywhere), ${}^{\circ}Hy - > aHy$, so that one would expect āu-. Moreover, though this is less essential, one would expect that the 'prop-vowel' would acquire the timbre of the laryngeal, but Adrados posits that this always became a. He tries to explain these two phenomena as follows (p. 43, paraphased): there is a chronological difference between the development of ${}^{\circ}H$ and eH which explains why they did not coincide: when °H becomes aH H falls, while the full vowel has the time ("tiene tiempo") to absorb the laryngeal, as a result of which it is lengthened and assimilated. It is not clear to me what "tiene tiempo" means and why it is the case the one time but not the other. The sign o is the symbol for a non-clear vowel that develops in a certain milieu and becomes a full vowel and here too, therefore, it is true to say that VHC becomes $\bar{V}C$. The development ${}^{\circ}H > a$ before consonant is a paper construction that cannot reproduce any reality. What Adrados proposes in fact amounts to vocalization of the laryngeal. It is therefore not possible to connect the theory of the 'prop-vowels' with the laryngeal theory to explain the prothetic vowel.

It is evident that the vocalic segment that developed before the laryngeal underwent the influence of this laryngeal rather than an original full vowel. According to Adrados the a is caused by the "abertura" of the laryngeal. Nevertheless the stem vowel was sometimes able to exert influence: èépo η (with ϵ under the influence of the stem vowel ϵ) beside Cret. $\alpha \epsilon \rho \sigma \alpha$. This difference is not further stipulated and is therefore unusable. This would explain why ϵ occurred only before stem vowel e, while with a stem vowel e0 the prothetic vowel was "forzosamente" e0. A glance at the survey of the material demonstrates, however, that this is not the case; e1. 68 f (of this book).

Furthermore Adrados is of the opinion that H could always (in all languages) give aspiration, e.g. $\xi \sigma \pi \epsilon \rho o \varsigma$, $\delta \delta \omega \rho$. For these words, laryngeal is, however, highly uncertain. It will not do to reply that for many prothetic vowels, too, the origin from laryngeal cannot be further demonstrated. Here in my opinion the principle can be demonstrated, but everything is still uncertain with reference to the supposed aspiration. For the rest, it is also true for Adrados here that "nunca se trata de un hecho regular".

i. The Pelasgian Theory

Georgiev, Vorgriechische Sprachwissenschaft (1941), p. 115, has tried to explain the prothetic vowel from Pelasgian, the IE language believed to have been spoken in Greece before the advent of the Greeks. This idea was most recently defended by Carnoy, Lingua 7 (1957) 242-53. They believe that the prothetic vowel α must be partly explained by assuming that the word in question has been derived from

Pelasgian, in which this a was formed from the PIE o-, the same as is found in (genuine Greek) ὀκέλλω.

The article contains a large series of words that are said to be Pelasgian, for which a PIE basic form is (re)constructed, but practically without any evidence, e.g. (p. 246): "Aµ ν Ko ς guettait les voyageurs pour les attaquer (i.e. *meug*- 'guetter, attaquer' — g > k)". Not the slightest value can be attached to this method of argumentation.

In itself, once the theory of Pelasgian has been accepted, the idea is of course not impossible. However, the words would have to be etymologically recognizable as non inherited loan-words. Anyone who states that a certain Greek word is borrowed from Pelasgian will have to give proof of this, which, of course, is practically only possible if the word has a reliable IE etymology. However, for the words with which we are concerned here and which have such an etymology there is no reason to assume the detour via Pelasgian; see the collection of material pp. 32-69. Only for $\alpha\beta\rho\sigma\sigma c$ $\beta\rho\sigma c$ Make $\beta\sigma c$ Hsch. can borrowing be made plausible — insofar as one can speak of borrowing here — for if $\alpha\beta\rho\sigma c$ is related to Skt. $\beta d\rho c$, one would expect αc in Greek (such as $\beta\sigma \rho c$ in fact has). However, there is little reason to speak of Pelasgian here. In this way, therefore, the problem of prothesis as such is not solved. For the rest the same general objections apply as to other theories which were discussed above.

j. Explanation by Means of the Laryngeal Theory

The attempts at an explanation discussed so far are therefore fundamentally incorrect. For completeness' sake mention will also be made of Lemaire-De Vaere, *Album Baur*, 1948 II, p. 31-9. This author accepts the laryngealistic explanation but tries to tie it in with Sievers' anlaut intensification (*IF* 42.193 ff., 43.1 ff. and 143 ff.), which is claimed to have been caused by the disappearance of vowels. What our conception must be of this is not made clear. The augment is also said to have its origin in a laryngeal (which thus formed part of the stem!). The author threatens to involve reduplication in this as well. It is to be hoped that this attempt will be abandoned. The article can safely be forgotten.

It was Kuryłowicz, Eos 1927, who explained the prothetic vowel by the PIE laryngeal, e.g. * $\partial_2 leg - > \mathring{\alpha}\lambda \acute{\epsilon}\gamma - \omega$. He started from the idea that every PIE root began with a consonant, so that therefore the "thème II" sometimes gave a laryngeal before consonant, * $\partial_2 elg - |\partial_2 leg - \partial_2 leg - \partial_2$

The arguments supporting this idea will be discussed later; first we should see what conclusions the material of the prothetic vowel in Greek permits of.

2. The Material for the Prothetic Vowel

The material for the prothetic vowel will be examined here on a basis of Frisk's etymological dictionary. First of all the four sonants are dealt with, in the order $\rho\lambda\mu\nu$, each preceded by the three vowels α , ϵ , o (ι and ν are after all not of importance here, see p. 19), in the order $\alpha\rho$ -, $\epsilon\rho$ -, $o\rho$ -, $\alpha\lambda$ -, $\epsilon\lambda$ -, $o\lambda$ -, etc. Next all other words with α -, ϵ -, o- are dealt with, with the exception of αF -, ϵF -, oF-, which are discussed separately at the end. The words will be divided into six groups, viz.:

- I. Words which are dealt with under other headwords;
- II. Words whose etymology gives no reason to speak of a prothetic vowel;
- III. Words which are of non-Indo-European origin;
- IV. Words which have no etymology at all;
- V. Words of which the proposed etyma are too unreliable to admit of further conclusions;
- VI. Words which may be of importance to the question of the prothetic vowel.

Needless to say, the limits between these categories cannot be sharply drawn. Words which in Frisk are simply referred to another headword have not been included here (e.g. $\alpha\gamma\alpha$), together with a number of non-Greek proper names which do not belong in a Greek etymological dictionary ($\alpha\gamma\alpha$). The designation α of the sixth group are briefly discussed; the conclusions follow at the end of each section and of the whole collection of material. The perfects with Attic reduplication, of which the first vowel is in essence identical with the prothetic vowel, are here mentioned only; they are dealt with in detail on pp. 113 ff. In the discussion of the separate forms the reconstructed form with laryngeal has usually already been given where this seemed probable or possible. This is simply for clarity's sake; the argumentation comes later.

a. αρ-

Ι. (elsewhere) Άράτυος s.v. ἀρόω; ἀργαλέος s.v. ἄλγος; ἄργεμον ἀργής ἀργιλιπής ἄργιλλος ἄργυρος ἄργυφος s.v. ἀργός (1.); ἀρείων ἀρετή s.v. ἀρέσκω; ἄρθρον s.v. ἀραρίσκω; ἀριδείκετος ἀρίζηλος s.v. ἀρι-; ἄριστος s.v. ἀρέσκω; 1. ἄρμα ἄρμενα ἀρμόζω ἀρμονία s.v. ἀραρίσκω; ἀρνειός s.v. ἄρσην; ἄροτρον ἄρουρα s.v. ἀρόω; ἀρπάζω s.v. άρπή; ἀρπαλέος s.v. ἄλπ(ν)ιστος; ἀρτάω s.v. 2. ἀείρω; ἀρτέομαι s.v. ἀραρίσκω; 1. ἀρτήρ s.v. 1. ἀείρω; ἀρτηρία s.v. 2. ἀείρω; ἄρτι ἀρτύω s.v. ἀραρίσκω; ἀρχή s.v. ἄρχω.

II. (no proth. vowel) 2. ἀργός (α-priv.), ἀρήν (ϝ-), ἄρκυς (Slav. **orkytā*; IE?), ἄρπη (*s*-), ἄρρατος (α-priv.), 1. ἀρύω (ϝ-).

III. (non-IE) ἀρασχάδες, ἀρβύλη, ἁρμαλά, ἄρμωλα, ဪκρποκράτης, ἀρράβη, ἀρ(ρ)-αβών, ἄρριχος, ἀρσενικόν, ἀρτάβη, ἄρτος, ἀρύβαλλος.

IV. (no etym.) ἀρά, ἄραβος, ἄραδος, ἀράζω, ἀραιός, ἁράκη, ἄρακος, ἀράχιδνα,

ἄρβηλος, ἀρβίννη, Ἀργαδεῖς, Ἀργεϊφόντης, ἄργελλα, ἀργέλοφοι, Ἄργος, ἄρδα, ἀρή, 1.2. ἀρίς, ἀρίσαρον, ἀριστερός, ἀρκάνη, ἄρκευθος, 2. ἄρμα, ἁρμαλιά, ἄροκλον, ἄρον, ἀρπεδής, ἀρπεδόνη, ἄρπεζα, ἀρπίς, ἄρπυς, ἀρρηνής, ἀρρηφόρος, ἄρσεα, ἄρταμος, ἀρτεμής, Ἄρτεμις, ἀρτέμων, 2. ἀρτήρ, ἀρτίαλα, 2. ἀρχός, ἄρχω, ἄρωμα.

V. (unreliable) ἄρδις, ἀρειή (Skt. *irasyá*), ἀρνευτήρ (ἀρνειός), ἄρυα (OCS *orěcht*, Lith. *riešas*? and κάρυα; ΙΕ?), 2. ἀρύω.

VI. $\alpha \rho \alpha$. The Baltic forms, which are generally considered to be cognate, point to *or (Lith. $a\tilde{r}$, Latv. ar) and *r (Lith. $i\tilde{r}$, Latv. ir). The existence of a Cypriot form $\tilde{\epsilon}\rho$ ($\tilde{\epsilon}\rho$), which was generally assumed on the strength of data from Hesychius, is contested on good grounds by Latte in his edition (II (1966), p. 816). It is therefore better to regard the existence of this form as very uncertain.

Laryngeal at the beginning of the word is possible if one starts from *or/r: $*\hbar_2or/\hbar_2r$; \hbar_2 on account of $\alpha \alpha$. However, the form $\alpha \alpha$ makes $*\hbar_2r$ improbable here (it would probably give $\alpha \alpha$). If Cypr. $\alpha \alpha$ is a reality (supra), laryngeal is out of the question. Laryngeal at the end of the word is also improbable, since one would have expected α in Lithuanian. It seems to me that $\alpha \alpha$ is secondary and that $\alpha \alpha$ and α are older. The last two forms are different realizations of α , depending on the place in the sentence; this view is shared by Schwyzer, p. 342 Zus., and Grammont, Phonétique du grec ancien (1948), p. 285 f. In my opinion one can expect the following developments a priori:

$$C_r C > ρα$$
 (cf. δρατός)
 $C_r V > αρ$
 $V_r C > ρα$
 $V_r V > ρ$

It never occurs at the beginning of the sentence. At the end one expects:

$$C_r >$$
 αρ (cf. ἦπαρ)
 $V_r >$ ρα

It seems that both elements were fused in $\alpha\rho\alpha$; possibly the - α here came into being under the influence of that of $\alpha\nu\alpha$, $\alpha\rho\alpha$, $\alpha\nu\alpha$ (assuming that it was older there; cf. Schwyzer, p. 622.8, and p. 152 ff. of this book). Grammont expects $\rho\alpha$ after a single consonant and $\alpha\rho$ after a double consonant (or long vowel + consonant). Hoenigswald, Lg.29 (1953) 288-90, is of the opinion that the facts support Grammont's proposition: he counts only eight times $\rho\alpha$ after 'heavy syllable' (e.g. A 430 $\tau\eta\nu$ $\rho\alpha$) out of the 91 cases in A-M, and not once out of 95 ρ ' (though he does after long diphthongs). Perhaps $\gamma\alpha\rho < \gamma\epsilon$ $\alpha\rho$ dates from the time when $\alpha\rho\alpha$ did not yet exist: this would eliminate the objection to this explanation of $\gamma\alpha\rho$ (Denniston, p. 56,

⁸ Τήν ρα may itself have been created on the example of τόν ρα, which is not at variance with Grammont's rule.

Humbert, p. 386), viz. that no *γάρα is found. (Incidentally, Hom. γ'ἀρ' could be represented not only as γάρ, but also as γάρ'; γέ ρα does not seem to occur.) The same form is presupposed by αὐτάρ < αὖτε ἀρ.

The connection with ἀραρεῖν, ἀρπάζω has no basis. (If these forms began with h_2 , it is impossible.)

That ἀράσσω and ῥάττω belong together is improbable, since ῥάττω began with μ - (καταρράκτης, etc.), while for ἀράσσω there is no evidence for F- (ἀπ-, κατ-). Apart from this Fαραχ-, Fρ $\bar{\alpha}$ χ- (* $\mu_e r \hbar_2 g h$ -, * $\mu_r \hbar_2 g h$ -) is conceivable; Frisk s.v. ράσσω.

ἀράχνη, Lat. aráneus < *arak-sn-. If OE renge, rynge 'spider, spider's web' goes back to *ruznia < *rəknia (Walde, WH s.v. araneus), a * $_e$ r \hbar_2 k- > arak- is conceivable; for Greek and Latin perhaps * \hbar_2 er \hbar_2 -. The word may, however, be of foreign origin.

ἀργός beside ἀργι- must, having regard to Ved. $rjr\dot{a}$: rji-, go back to *αργ-ρός. Ved. $rjr\dot{a}$ - points to * $rg\hat{e}$ - $r\acute{o}$ -, Hitt. harkis 'white, bright', gives a laryngeal, so that * $h_2rg\hat{e}$ - $r\acute{o}$ - (beside * $h_2erguro$ - in ἄργυρος, Skt. $\acute{a}rjuna$ -) must have been the original form. One cannot speak of prothetic vowel, since \mathring{a} ρ- is based on r.

The development $\hbar_2 r \hat{g} - > \hat{\alpha} \rho \gamma$ - is interesting. It demonstrates that in the group HRC- the vocalic element appeared before the sonant (as when the vocalic sonant is at the beginning of the word). In this structure (CRC) one might also have expected a development R > RV, with later vocalization of the laryngeal, i.e. of $\hbar_2 r \hat{g} - > \alpha \rho \alpha \gamma$ - (and with $\hbar_1 * \hat{\epsilon} \rho \epsilon \gamma$ - and $\hbar_3 * \hat{\delta} \rho \delta \gamma$ -). However, there is no evidence of such a development.

If $\tilde{\alpha}$ ρδω, as * $\dot{\alpha}$ -ραρδω, is related to ραίνω, one would expect * $\dot{\alpha}$ ρραίνω there ($\dot{\alpha}$ -ρρα-; if not * $\dot{\nu}$ ραίνω < * $\dot{\hbar}$ ur-). For ραίνω (connected with ραθάμιγξ ράσσατε ερράδαται Hom.; non-IE) see Kuiper, Μνήμης χάριν, p. 216, with n. 23. The analysis * $\dot{\alpha}$ ραρδω has no support at all.

That $^{\lambda}$ ρέθουσα is connected with ἀρέσκω is not evident semantically. The analysis $^{*h}_{2}redh$ - is possible, but names like *Radantia* are not a sufficient basis for IE *redh -, since they do not convey the impression of being of IE origin; see for instance the survey in Krahe, *Sprache u. Vorz.*, p. 58.

ἀρέσκω has a disyllabic root; as ἀρέσαι presupposes e-vocalism, $*\hbar_2 er\hbar_1$ - is probable. Forms with $*\hbar_2 re\hbar_1$ -, Gr. *ἀρη-, elsewhere $*r\bar{e}$ -, are not known.

ἀρήγω 'aid, succour', cannot be connected with OS $r\bar{o}kian$ 'take care of', since the words related to the latter point to another meaning (cf. Falk-Torp, Norw.-dän. etym. Wb., p. 347 and idem, Sprachschatz, p. 333).

 $\dot{\alpha} \rho \iota$, $\dot{\epsilon} \rho \iota$ cannot have had a laryngeal at the beginning, since a laryngeal would have determined the quality of the vocalism; see p. 91.

 \mathring{a} ριθμός beside Germ. and Celt. $r\bar{\imath}m$ 'series, reckoning, number' may go back to * $\hbar_2 ri$ -, but * $\hbar_2 eri$ - is also possible.

 \tilde{a} ριστον < *αιερι- beside Goth. air, OIcel. ār 'early' < *aieri-, Av. ayarə 'day' suggests * \hbar_2 eier-; ἢερι- by metrical lengthening.

The connection of ἀρκέω with Hitt. hark- 'hold, have' is just as weak as that

with Lith. $r\tilde{a}ktas$ 'key', OHG rigil 'bolt' (* \hbar_2erk -/ \hbar_2rek -?). If Lat. arceo belongs here, this points to * \hbar_2erk - or * \hbar_2rk -.

ἄρκτος. Only Hitt. hartagga 'predator' could point to laryngeal, but the connection is far from certain; hartagga may be non-IE.

ἀρνέομαι, Arm. uranam 'deny' may point to $ar-|\bar{o}r-|^2\hbar_2\bar{o}r-|^2$; or $r/\bar{o}r^2$); however, there is insufficient certainty here.

For ἄρνυμαι Hitt. arnuzi 'bring, take away' (Av. ərənav- 'permit') would not point to laryngeal, but semantically the similarity is not great. Arm. arnum 'take' does not permit of further conclusions either.

 \dot{a} ρ \dot{o} ω \dot{a} ρ \dot{o} σαι is from the stem * $\hbar_2 er \hbar_3$ -, see p. 129.

"Apaula. Szemerényi, Syncope, p. 203-14, goes into details on this. The form Άρεπυια occurs on a vase from Aegina (VIa) and EM ἀρεπυιαῖ; it can be read everywhere in Homer (Π 150 α 241 = ξ 371 ν 77). The word has been associated with άνηρείψαντο (Y 234 δ 727 α 241 = ξ 371 υ 77), which one prefers to read as *ἀνηρέψαντο on the authority of Pi. Paean 6.136 and Hsch. ἀνερεψάμενοι· ἀναρπάσαντες. The manuscripts give ει unanimously for Homer. Hes. Th. 990 has αναρεψαμένη, with vv.11. αναρειψαμένη and ανερειψαμένη. As the last two may be based on the influence of the Homeric tradition, the first would be backing for the change into ἀνηρέψαντο. In that case the origin of the ι is unclear (according to ἥρειψα Pi., Hdt.?). On the other hand it would be understandable if the word were identified with ἐρέπτομαι (without v.l. in Hom., B 776 E 196 Θ 564 Φ 204 ι 97 τ 553). The timbre of the initial phoneme of ἀνηρείψαντο is not known. In favour of α are Hes. Th. 990 ἀναρε(ι)ψαμένη beside ἀνερειψαμένη. Pi. Paean 6.136 is of no value, as the syllable in question is a conjecture, ἀ[να]ρέψατο. The parallelism ἄρπυιαι άνηρείψαντο (α 241 = ξ 371 υ 77), άνηρείψαντο θύελλαι (δ 727), άναρπάξασα θύελλα (δ 515) suggests a relationship between ἀνηρείψαντο (from *αρεπ-), Άρεπυια/ Άρπυια and άρπάζω. It is in itself conceivable that we are concerned here with a recent "etymologizing" explanation, but the very form "Αρπυιαι ἀνηρείψαντο indicates rather that an old figura etymologica (ἀρεπυιαι ἀνᾶρέψαντο, Fick, Od., p. 2) forms the basis. In that case the aspiration of $\dot{\alpha}$ ρπάζω remains unexplained (after αίρέω είλον?).9 It is improbable that ἐρέπτομαι is assimilated from *ἀρεπ-(Szemerényi, p. 205); this word should be kept separate. The parallelism with ὀρόγυια (v. p. 37) suggests a paradigmatic ablaut *ἀρέπυια *ἀρπυιᾶς here (Kretschmer, Vaseninsch., p. 208 f.). This would indicate that this is an old IE word. There is no reason to start from a perfect participle. The original forms will therefore have been *h2répusih2 *h2rpusiéh2s. See Add

ἄρσην: ἔρσην excludes laryngeal; see p. 91.

Conclusion. — Prothetic vowel from laryngeal is possible for ἀριθμός, ἀρήγω, ἀρέθουσα and ἀρεπυια. ἀργός and ἄραρα (ἀραρίσκω), ἀρηρομένη (ἀρόω) and ἀρέσκω also had initial laryngeal, but here one does not speak of a prothetic vowel.

⁹ Cf. the aspiration of ἀμαρτάνω, p. 109f.

b. ερ-

- I. (elsewhere) ἔργω s.v. εἴργω (εϝ); ἐρεείνω, 1. ἐρέω s.v. ἐρευνάω; ἐρι- s.v. ἀρι-; ἐρίηρες ἐριούνης s.v. ἐρι-; ἔρση (εϝ); ἐρυθρός s.v. ἐρεύθω; ἐρύκω s.v. ἔρυμαι; ἐρυσίβη (?), ἐρυσίπελας s.v. ἐρεύθω.
- II. (no proth. vowel) ἔρα, ἔργον (F-), ἔρδω (F-), ἔριφος (OIr. $heirp < *erbh\bar{\imath}$?), ἕρκος (S-), ἔρπω (S-), ἔρρω (F-).

III. none.

- IV. (no etym.) ἔρανος (connected neither with ἔροτις, nor with ἑορτή), ἐρεσχηλέω, ἐρίθακις, ἔρῖθος, ἐρῖνεός, ἔρινος, ἐρίσφηλος, Ἐριχθόνιος, ἐριώλη, ἑρμηνεύς, ἔροτις (v. ἔρανος supra), ἔρραος, ἐρρεντί, Ἔρρος, ἔρσαι, ἔρφος, ἔρχατος.
- V. (unreliable) ἔραμαι (*frṣyati*), ἐρέας, ἐρείκη (Centr. Eur.?), ἐρητύω (connected with ἐρωή?), ἔρις, ἕρμα, Ἑρμής, Ἐρυσίχθων, ἔρχομαι, ἐρωδιός, ἐρωτάω.
- VI. ἐρέβινθος, Lat. ervum, OHG araweiz, do not point to a prothetic vowel. It is probably of non-IE origin.
 - ἔρεβος, Arm. erek as against Goth. rigis admits of * h_1 regu-.
- ὲρέθω allows of an analysis * $\hbar_1 redh$ just as much as of the non-committal connection with ὄρνυμι (with a root * $\hbar_3 er$ -).
- ἐρείκω as against Skt. likháti, Lith. riekiù; cf. ἐρήριγμαι (p. 118), but ἤρικε (P 295); * \hbar_1 reik-?
 - ἐρείπω as against Lat. ripa, ON $r\bar{\imath}fa$ (see Frisk); cf. ἐρήριπε (Ξ 55); * $\hbar_1 reip$ -? ἐρέπτομαι as against Lith. ap-repti 'grasp', Alb. rjep- 'rob', Lat. rapio; * $\hbar_1 rep$ -. ἐρέτης as against Lat. remus, Skt. aritra-; stem * $\hbar_1 er\hbar_1$ -, cf. p. 132.
- 1. ἐρεύγομαι as against Lith. *riáugmi*, Russ. *rygát*₆, Lat. ē-rūgo, etc., *ħ₁reug-. Arm. orcam < *orucam.
- 2. ἐρεύγομαι, Lat. $r\bar{u}gio$, OCS rykati (with *k); * $\hbar_1 reug$ -; may be identical with the preceding one.
- ερευνάω beside OIcel. raun 'attempt, examination' $< *roun-\bar{a}$ renders $*h_1$ reu-n-possible.
- - èρέχθω has a prothetic vowel if connected with Skt. ráksas- 'destruction'.
- $\hat{\epsilon}$ ρ $\hat{\eta}$ μ ο ς. The link with Lat. $r\bar{a}rus$, $r\bar{e}te$ seems very unreliable to me. However, should it be correct, then Lat. $r\bar{e}$ may go back to $*\hbar_1 r\bar{h}_1$ -, $r\bar{a}$ to $*\hbar_1 r\bar{h}_1$ -, Gr. $\hat{\epsilon}$ ρη- to each of these two forms. For $*\hbar_1 r\bar{h}_1$ > $\hat{\epsilon}$ ρη- see p. 95. Goth. arms could also belong here as $*\hbar_1 or \bar{h}_1 m$ -.
- 'E ρ $\bar{\iota}$ v $\dot{\iota}$ ς connected with Skt. *riṣyati* 'suffer harm' could be * $\hbar_1 ris$ -, but this remains very uncertain.
- ἔρνος perhaps cognate with ὄρνυμι, which has a stem * \hbar_3er -; ἐρ- is unclear, see p. 38. Cf. Norw. run(n)a 'branch'.

ἔρυμαι. An interchange $Fερυ-/Fρ\overline{υ}$ - is unexplained (see p. 205). Ruijgh, *Etudes*, p. 358 n. 32, wonders whether $Fερυ-/Fρ\overline{\upsilon}$ - (instead of * $Fρ\overline{\upsilon}$ -) developed on the analogy of $κερ\overline{\upsilon}$ -/ $κρ\overline{\upsilon}$ - ($<*\hat{k}er\hbar_2-/\hat{k}r\hbar_2$ -). It is not necessary on the strength of the present εἰρύομαι to assume a prothetic vowel $\hat{\varepsilon}$ -Fερυ- (Frisk, cf. *idem*, I 568, top: from the perfect or *metri causa*).

 $\mathring{\epsilon}$ ρύω. Το εἰρύομαι the same applies as was stated above.

 $\hat{\epsilon}$ ρωή. Both the Germanic words going back to * $r\bar{e}s$ -o-, - \bar{a} , and those going back to * $r\bar{e}u\bar{a}$, * $r\bar{o}u\bar{a}$, leave a prothetic vowel.

Conclusion. — There is a large group that allows of an analysis Hre(R)T-: ἔρεβος ἐρέπτομαι ἐρέφω ἐρέχθω and ἐρείδω ἐρείκω ἐρείπω ἐρεύγομαι ἐρεύθω ἐρευνάω ἐρωή. Ἐρέθω and ἐρῆμος are uncertain. Ἐρείδω (ἐρηρέδαται), ἐρείπω (ἐρήριπε), ἐρέτης $(r\bar{e}mus)$ have support for laryngeal.

c. op-

Ι. (elsewhere) όραυγέομαι s.v. ὁράω; ὅργανον ὅργια s.v. ἔργω; ὅργυια s.v. ὀρέγω; ὀρέοντο s.v. ὄρνυμι; ὀρεσκῷος s.v. ὄρος; ὀρκάνη ὅρκος s.v. ἔρκος; ὄρμενος s.v. ὄρνυμι; 1. ὅρμος s.v. εἴρω; ὄροβος s.v. ἐρέβινθος; ὀροθύνω s.v. ἐρέθω; ὄρος s.v. ὄρνυμι (*ħ3er-os, p. 131).

II. (no proth. vowel) ὁράω ($_{\text{F}}$ -), ὀργή ($_{\text{U}}$ rjά, $_{\text{U}}$ -, cf. p. 241), ὀρθός ($_{\text{U}}$ rdhvá-, $_{\text{U}}$ -, cf. p. 241), ὀρθρός ($_{\text{F}}$ -), ὀρμή ($_{\text{F}}$ -), ὀρόδαμνος ($_{\text{F}}$ -), ὀρός ($_{\text{L}}$ at. $_{\text{Serum}}$), ὄρρος ($_{\text{U}}$ r. $_{\text{C}}$ rersa), ὄρτυξ ($_{\text{F}}$ -), ὀρφανός ($_{\text{C}}$ robh-), ὀρφώς.

III. (non-IE) ὀρεσχάς, ὀρίγανον, ὀρίνδης, ὄρυζα.

IV. (no etym.) ὄρδημα, ὀρε(ι)ᾶνες, ὅρκυς, ὅρμινον, 2. ὅρμος, ὀρόντιον, ὅρπηξ, ὀρρωδέω (ἀρρ-), ὀρσολόπος, ὀρταλίς, 1.2. ὀρύα, ὀρυμαγδός, ὄρχιλος, ὄρχος.

V. (unreliable) ὀρεύς (ὅρος?), ὀρθαγορίσκος, ὅρος, ὀρσοθύρη (ὅρρος?), ὄρφνη, ὄρχαμος, ὀρχέομαι (ὄρνυμι, ἔρχομαι).

VI. ὀρέγω beside rego, Skt. rjati (irajyáti, see p. 236 f.), etc.; *ħ3reĝ-. A detailed treatment may be found in Szemerényi, Syncope, pp. 229-38. Derived from ὀρέγω is ὄργυια ὀρόγυια, 'length of the outstretched arms, fathom'. This connection seems evident. 'Ορέγω is often linked with χείρ in Homer. Semantic parallels in Szemerényi. He regards the form as a perfect participle, *ώρογ-υια, by syncope *ώργυια > ὄργυια. He thus regards the Attic reduplication ὀρωρέχαται (II.) as recent. The form ὀρόγυια (Sappho, Pi., Ar., inscr.) must then have been the result of anaptyxis, for *ἀρογυια would not have become ὀρόγυια. This is, of course, an entirely arbitrary supposition. In itself it does not appear as if ὀρόγυια is recent. Anaptyxis forms like hερεμες are rare and hardly ever occur in literary language (Schwyzer, p.278), certainly not in such different authors. Homer has only ὅσον τ'ὄργοι' Ψ 327 ι 325 κ 167 and further ἐννεόργυιος λ 312. The derivation from *ώρογ- is therefore improbable. As in the case of ἀρεπυια/ἄρπυια original paradigmatic ablaut is obvious for ὀρόγυια/ὄργυια, i.e. * $\hbar_3 r \delta \hat{g}$ -us-i \hbar_2 * $\hbar_3 r \hat{g}$ -us-i $\epsilon \hbar_2 s > \delta$ ρόγυια * δ ργυιᾶς, as J. Schmidt, KZ 32 (1893) 348 f. supposed. There is no reason to assume that the form goes back to a perfect. Nor is Szemerényi's explanation of -ωρυγος in διώρυγα, etc. (ἐνόδια and δίκτυα) a convincing one. This form occurs only in Xen. Cyn. 2.5 and on two inscriptions. This technical term may be of great antiquity (by nature the fathom is a measure of cordage; cf. κ 167 $\pi\epsilon$ iσμα). A development *ἀρογυ(ι)ος > *ἀρυγυος > *ἀρυγος, such as Szemerényi suggests, is highly improbable. Apart from the disappearance of υ t, one does find assimilation ϵ - υ > υ - υ , but never > υ - υ (Schwyzer, p. 255); there is rather a tendency towards dissimilation υ - υ > υ - υ (ibid., p. 258). Comparing Lejeune, $Trait\acute{e}$, p. 162 n. 3, Arg. υ πωρυφια: οροφα, ἐπώνυμος: ὄνομα, it seems to me that *-ωρογ->-ωρυγ- (: ὀρόγ- υ - ι) is more probable. There is thus no reason to assume that this term originally contained the word ὀρόγ υ ια; -ωρυγ- ι 0ς therefore points to *- \hbar 3 $ro\hat{g}$ - (the ι 0 is the lengthening in compounds).

I do not see the point of Szemerényi's idea of ascribing \hbar_1 to ὀρέγω (p. 231). There is not the slightest reason to assume \hbar_1 instead of \hbar_3 and I do not see how in that case he plans to explain the o; * $\hbar_1 ore \hat{g}$ - cannot be considered. Forms with *ἐρεγ- have not been demonstrated. The connection with ὄρνυμι solves nothing and merely creates new problems. The inclination to reduce everything "zur grossen 'Bewegungs'wurzel er-" (Frisk, II 424) is great. "Ορνυμι probably also has \hbar_3 . The forms ἔρσεο, etc., present an awkward problem for the laryngeal theory. However, it is methodically incorrect to deny the rule, which is based on many facts, on the strength of a single exception.

ở ρεχθεῖν as against ροχθεῖν; ὀρεχθεῖν occurs only once in Homer, Ψ 30, where the meaning has been disputed (cf. Leaf *ad loc.*). The link with ροχθεῖν cannot be regarded as certain.

 $\delta \rho$ i v ω from the root of $\delta \rho$ vυμι; * $\hbar_3 r$ -ei- or * $\hbar_3 r$ - $i\hbar$ is possible. The relation to Lat. ir- $r\bar{i}$ -tare, $r\bar{i}$ vus, Skt. $rin\bar{a}ti$ is uncertain.

ὄρνις from * \hbar_3er -; cf. p. 130.

ὄρνυμι see p. 132 f.

ορούω. The prothetic vowel, indicated by comparison with Lat. ruo, can be explained by a laryngeal; the word is considered to be related to δρνυμι whose root is * \hbar_3er -, so that * \hbar_3reu - seems obvious. However, the form * \hbar_3reu - would have given *ορευ-, not ορου-. Schwyzer compares κολούω κελεύω (τελευτή) (ἀλεύεται may be explained as * \hbar_2leu -). If Lith. $k\acute{a}lti$ 'forge, hammer' is related to κολούω (Frisk, I 897), this indicated a disyllabic root (* $kol\hbar$ -). In that case a basic form * $kl\hbar_3$ -eu-> κολου-would be conceivable for κολούω. In the same way κελεύω could be based on * $kl\hbar_1$ -eu-; here, however, a laryngeal cannot be pointed to. (The connection with καλέω is not strong semantically. Skt. $kal\acute{a}yati$, beside $k\bar{a}l\acute{a}yati$, 'impels, bears' points perhaps to * $kol\hbar\acute{e}jeti$.)¹⁰ This would give * $r\hbar_3$ -eu- (or * $\hbar_3r\hbar_3$ -eu-) for ορούω, but there is no indication of such forms. Frisk II 423 points to κρούω, for which Balto-Slavic forms suggest PIE *krous-, so that perhaps one must start from * $\hbar_3rou(s)$ - (the aor. ορούσαι seems the oldest form) for ορούω too.

In addition the vocalism of ἀκόλουθος as against κέλευθος is not explained if it must be connected with κελεύω. However, the word may well be non-IE; cf. ἄρκευθος. Cf. the problem of ἐρέφω: ὄροφος, ἐρέθω: ὀροθύνω, ἐλεφαίρομαι: ὀλοφώϊος.

ὀρύσσω beside Lat. $r\bar{u}ga$, Lith. $ra\tilde{u}kas$ 'groove' may contain * $\hbar_3 r(e)ug$ -. A difficulty is formed by the Greek χ ; see Frisk.

ὄρχις beside Av. *ərəzi* (du.), Lith. $e\tilde{r}\tilde{z}ilas$ may be $*\hbar_1(e/o)r\hat{g}hi$ -, but there is no reason to assume a laryngeal.

Conclusion. — One can speak of a prothetic vowel only in ὀρέγω ὀρούω ὀρίνω and ὀρύσσω, where a laryngeal is possible. 'Ορεχθεῖν is uncertain.

d. $\alpha\lambda$ -

- Ι. (elsewhere) ἄλγος s.v. ἀλέγω; 1. ἀλέα s.v. εἵλη (εϝ); ἀλεκτρυών s.v. ἀλέξω; ἀλής (αϝ); ἄλις s.v. ἀλής (αϝ); ἀλλάσσω ἀλλοδαπός s.v. ἄλλος; ἄλπ(ν)ιστος s.v. ἔλπομαι (?); ἄλυσις s.v. εἰλύω (?); ἀλύω s.v. 2. ἀλέα.
- II. (no proth. vowel) ἀλάομαι (Latv. aluôt, *al-), ἀλδαίνω (alo), ἀληθής (α priv.), ἀλθαίνω (alo), ἁλίσκομαι (F-), ἄλλομαι (s-), ἄλλος (*alio-), ἄλς (s-; IE?), ἀλύτᾶς (u-?), ἀλφάνω (Skt. $arhati < *alg^uheti$, * \hbar_2el-g^uh -).
- III. (non-IE) ἀλάβαστος, ἄλιζα (Goth. *alisa, Russ. olbcha; Centr. Eur.?), ἀλόη, ἄλφα.
- IV. (no etym.) ἀλαζών, ἀλαιθερές, ἀλαλά, ἀλάλυγξ, ἀλαός, ἄλαστος, ἄλεισον, ἀλίβας, ἀλιβδύω, ἀλίγκιος, ἀλίη, ἀλικάκκαβος, ἀλινδέω, ἄλιξ, ἄλιος, ἀλισγέω, ἀλίφαλος, ἀλκυών, ἀλλᾶς, ἄλλιξ, άλοσύδνη, ἄλυσσον, ἀλωή.
 - V. (unreliable) ἄλιψ, ἄλσος, ἄλυζα, ἀλυκτοπέδη, ἄλφι (ΙΕ?).
- VI. $\dot{\alpha}\lambda\alpha\pi\dot{\alpha}\zeta\omega$. The α may be prothetic. For the Aeschylean forms without see p. 80.
- 2. ἀλέα ἀλέομαι, ἀλύσκω may contain $*\hbar_2 l(e)u$ -, but related forms from other languages are not known.

άλέγω 'to care': ἄλγος 'pain, grief'. The group has recently been discussed by Szemerényi, Syncope, pp. 148-60. He points out that Frisk's comparison with ἀλέξω: ἀλκή is misleading. This formation is normal for ἀλκή, unknown for ἄλγος. * H_2 elg-es- (e.g. Kurylowicz, Etudes, p. 43) would be impossible. One expects * \hbar_2 leg-os, cf. ἔρεβος, Goth. riqis < * \hbar_1 reg"os, not * \hbar_1 erg"- (cf. Schwyzer, p. 512,5). The form *άλέγος is confirmed by άλεγεινός < -es-no- (and others, δυσηλεγής ἀπηλεγέως ἀνηλεγής and ? τανηλεγής). For the semantic objections Szemerényi compares Goth. kara 'sorrow': Eng. to care and Eng. trouble and to trouble. Incomprehensible, both semantically and formally, is his suggestion to connect ἀλέγω as 'to reckon, count' with λέγω; cf. for this p. 26. His thesis: "this means that if we want to separate ἀλέγω from ἄλγος we have to connect it with λέγω" (p. 151 f.) is unclear to me. It starts from the idea that there must be related forms known of every IE word; cf. (ibid.) "... only ἀλέγω would remain to carry the burden of an IE *leg-...". On the contrary, it would not be surprising if no related forms could be shown any more of a very large number of the IE inherited words. For Szemerényi's view of the prothetic vowel see p. 47. It has been assumed that άλγος was formed by syncope from *ἀλέγος (De Saussure, Mél. Graux, p. 743; likewise Szemerényi). But as such syncope is very rare,¹¹ it is perhaps better to explain ἄλγος as having come into being on the analogy of forms with zero grade $*\hbar_2 lg - > \dot{\alpha}\lambda\gamma$ - as for instance ἄλγιστος. Cf. κράτος instead of κρέτος (Aeol.) beside κράτιστος (and κάρρων κάρτων for κρέσσων; in the same way, therefore, ἀλγίων for * $\hbar_2 legi\bar{o}n > *\dot{\alpha}\lambda\epsilon\zeta\omega\nu$). And yet in my opinion the possibility of * $\hbar_2 elgos$ for the basic language cannot be excluded, having regard to Skt. $\acute{o}jas$ -, Av. aojah-, Lat. augus-tus, PIE * $\hbar_2 eugos$ and γένος < * $\hat{g}en\hbar_1 os$, βέλος < * $g^u el\hbar_1 os$.

άλείτης (ἀλοιτός, ἀλιταίνω) may be * \hbar_2 leit-. Perhaps in OHG līdan, etc., see p. 85.

ἀλείφω 'anoint'. The formal differences $(\alpha : \text{zero}, \varphi : \pi)$ make the connection with $\lambda \iota \pi$ - objectionable, of which the meaning is also more that of 'stick', causat. 'glue'. 'Aλείφω itself can be analysed as * $\hbar_2 leibh$ -.

ἀλέξω, Skt. $\emph{rákṣati}$: ἀλκή (OE $\emph{ealgian}$) from a stem * $\hbar_2\emph{lek}$ -/ $\hbar_2\emph{elk}$ -; see p. 89.

άλέω ἄλεσσα from the disyllabic root * $\hbar_2 el\hbar_1$; see p. 129.

άλίνειν: Lat. lino levi may go back to $\hbar_2 l(e)i$.

2. $\check{\alpha}\lambda\kappa\eta$. Germ. *al\chi_- and *el\chi a(n)- make laryngeal impossible. (It seems to me that * $\hbar_1 lk$ - would have given * $\hat{\epsilon}\lambda\kappa$ - in Greek.)

ἄλοξ 'furrow' has many by-forms, see Frisk, I 77. In my opinion the laryngeal theory can offer no explanation of this. The forms are so capricious that one must consider non-IE origin. This is perhaps indicated by εὐλάκ $\bar{\alpha}$ (Lacon.), αὔλακες: αὐλάχ $\bar{\alpha}$ Hsch. with κ : χ and further αὖλαξ (Hes., Hdt., Pi.): ὧλαξ (EM), ὁμ-ώλακες (A.R.) with αυ: ω, cf. θαῦμα: θῶμα (p. 177) and finally the change of the initial phonemes ἀλοκ-/ολοκ-/αὐλακ- compared with ὀρεσχάς· τὸ σὺν τοῖς βότρυσιν ἀφαιρεθὲν κλῆμα Hsch., which has the forms ὀρε-/ἀρα-/αὐρο- (for these forms see Frisk s.vv. ἀρασχάδες and αὐροσχάς).

ἀλφός (Lat. *albus*) cannot contain a disyllabic root; if Arm. *alawni* 'dove' and Serb. *làbud* 'swan' have a disyllabic root and ἀλωφούς: λευκούς Hsch. belongs to this group, it must be separated from ἀλφός. In itself ἀλφός: ἀλωφός may be interpreted as * $\hbar_2(e)lbh$ -: $\hbar_2l\bar{o}bh$ -.

The relation of $\dot{\alpha}\lambda\dot{\omega}\pi\eta\xi$ to the related words is not clear. Arm. *alues* < *alopek-cannot be separated from it, but allowance must be made for the possibility of non-IE origin.

Conclusion. — Laryngeal is probable for ἀλέγω (ἄλγος) and ἀλέξω (ἀλκή). One can speak of a prothetic vowel in ἀλέ(F)ομαι, ἀλείτης, ἀλείφω and ἀλίνειν. Ἄλοξ and ἀλώπηξ are unclear.

e. ελ-

I. (elsewhere) ἐλαίαγνος s.v. ἐλαία; ἑλάνη s.v. εἰλέω (εϝ); Ἐλάστερος s.v. ἐλαύνω;

¹¹ Szemerényi's recent study (*Syncope*) confirms this impression rather than that it demonstrates that syncope was a phenomenon of any great extent in Greek. (Review by Lejeune, *BSL* 61 (1966) 34-8.)

ελδομαι (εγ); ελελίσφακος s.v. ελελίζω; ελεμος s.v. ελυμος; ελινος ελιξ s.v. 2. ειλέω; ελίχρυσος s.v. ελος; ελπομαι (εγ).

II. (no proth. vowel) ἔλαφος (*el-n-), έλεῖν (s-), έλίκη (F-), ἕλκος (Skt. $\acute{a}r\acute{s}as$ -), ἕλκω (s-), ἕλος (Skt. $s\acute{a}ras$ -), ἔλπος (s-?).

III. (non-IE) ἐλαία, ἔλεγος, ἑλεδώνη, ἐλέφας, ϝελχανος.

IV. (no etym.) ἐλάργει, ἐλέα, ἐλειός, ἐλελεῦ, Ἑλένη, ἐλεόν, 2. ἐλεός, ἑλεσπίδας, Ἐλευσίς, Ἑλλάς (s-?), ἔλλερα, Ἑλλήσ(ποντος), ἔλυμος.

V. (unreliable) ἐλασᾶς, ἐλάτη, ἐλεγαίνειν, ἐλθεῖν, ἑλίκωψ, ἐλῖνύω, ἑλλέβορος, ἐλλεδανοί, ἔλλοψ, ἐλλύτας (εἰλύω), ἑλμίς (*u*-?), ἐλύδριον.

VI. ἐλαύνω ἐλάσαι has disyllabic root *(ħ₁)elħ₂-, p. 197.

 $\grave{\epsilon}$ λαφρός as against OHG *lungar*. If this is based on **lng*

ἐλαχύς as against Skt. laghú- from *ħ₁lng"hú-? Cf. Lith. leñgvas.

ὲλέγχω is not interpreted with sufficient certainty. All suggested related words begin with l-. The structure of the word allows of * $\hbar_1 len-g^{(u)}h$ - (cf. Av. renjaiti 'makes light, strong', Latv. langāt 'curse'). In itself ἐλέγχω could go back to a conjunctive * $\hbar_1 l-en-gh-\bar{o}$ of a nasal present * $\hbar_1 l-n-egh-mi$ * $\hbar_1 l-n-gh-mes$; for this phenomenon see Kuiper, Nasalpr., p. 97 and p. 236 f. of this book. For the connection with Hitt. linkzi 'swear' see p. 93.

ὲλελίζω must, if related to Skt. *réjati*, etc., go back to a reduplicated form. A stem $*\hbar_1 l(e)ig$ - is conceivable, but this expressive word probably escapes linguistic analysis.

 ξ λεος from the stem * $\hbar_1 ley$ -, see p. 109.

 $\grave{\epsilon}\lambda$ ε $\acute{\epsilon}$ θ ε $\acute{\epsilon}$ ο $\acute{\epsilon}$ as against Lat. *liber*, Ven. *lo.u.zeroφo.s.* (dat. pl.), etc., may go back to * \hbar_1 *leudh*-.

ὲλεύσομαι as against OIr. lod, luid < *ludh-om (Skt. ró(d)hati?) gives *e-leudh-from * \hbar_1 leudh-? It remains an open question whether this stem is identical with the preceding one.

 $\mathring{\epsilon}$ λεφαίρομαι, to which may belong ὀλοφώϊος, remains uncertain. Lith. *vìlbinti* 'make a fool of' may point to **μelħ*- (in τ 565 οἴ $\mathring{\rho}$ ' ἐλεφαίρονται $\mathring{\rho}$ - can be read instead of the $\mathring{\rho}$ ' τ' $\mathring{\delta}$ ' $\mathring{\gamma}$ ' of the manuscripts). With ἐλεφ-: *vìlbinti*, cf. ἀλώπηξ: Lith. *vilpišỹs*.

Conclusion. — Ἐλαύνω perhaps had laryngeal at the beginning on account of ἐλήλαμαι, where, however, one does not speak of a prothetic vowel. Prothetic vowel may be suspected in ἐλαφρός ἐλαχύς ἐλέγχω ἐλεύθερος ἐλεύσομαι and ἔλεος. The interpretation of ἐλελίζω and ἐλεφαίρομαι is highly uncertain.

f. oλ-

- I. (elsewhere) ὀλαί s.v. οὐλαί; ὀλιγηπελέων s.v. ὀλίγος (*ἄπελος, p. 89); ὁλοκόττινος s.v. ὅλος; ὀλοός s.v. ὅλλυμι; ὁλοσχερής s.v. ὅλος; ὀλούφω s.v. ὀλόπτειν; ὀλοφλυκτίς s.v. ὀλός; ὀλοφώϊος s.v. ἐλεφαίρομαι.
 - II. (no proth. vowel) δλκή (s-), ὅλμος (μ -?), ὅλος (Skt. sárva-).

III. (non-IE) "Ολυμπος, ὅλυνθος.

IV. (no etym.) ὅλβος, ὀλολύζω (cf. ἐλελίζω), ὀλός, ὅλυραι.

V. (unreliable) ολοοίτροχος.

VI. ολιβρόν may be compared with OE slipor < *slib-ro-; see further p. 84 ff.

 $\delta\lambda$ ίγος, Arm. *alk'at* 'poor, needy' would, if connected with λοιγός 'ruin', give an δ -/zero interchange within Greek; see for this p. 74 ff.

όλισθάνω from the stem *όλιθ-, connected with OE slīdan, etc.; see p. 85.

ὄλλυμι from the stem * $\hbar_3el\hbar_1$ -; see p. 131.

δλόπτειν Hsch., Call., ὀλούφω Hsch. beside λέπω; Lat. liber < *l(e)ubh-? The etymology is weak. It is difficult to explain original relationship of $\lambda \epsilon \pi$ -/ὀλουφ-within IE. Foreign origin must therefore be considered $(\pi/\phi, -lo/o\upsilon)$.

όλοφύρομαι, Arm. olb. Less certain is Lith. ulbúoti 'call, sing, write'.

Conclusion. — "Ολλυμι has laryngeal. Prothetic vowel as against s-: δλιβρόν δλισθάνω. Prothetic vowel beside zero (in Greek): δλίγος (λοιγός). "Ολόπτειν and δλοφύρομαι are entirely uncertain.

g. αμ-

I. (elsewhere) ἀμαρτή s.v. ἄμα; ἄμβλυς s.v. ἀμαλός; ἀμείρω s.v. ἀμέρδω (?); ἄμμος (from ἄμαθος and ψάμμος?); ἄμπωτις s.v. ἀνά; ἀμφιάζω Ἀμφιάραος ἀμφίον ἀμφίπολος ἀμφισβητέω ἀμφορεύς ἀμφουδίς s.v. ἀμφί.

II. (no proth. vowel) ἄμα (s-), ἄμαθος (s-?), Ἄμάλθεια (α- priv.), ἀμάομαι (s-?), ἀμέθυστος (α- priv.), ἀμενηνός (α- priv.), ἀμνός (agnus etc.), ἀμύμων (α- priv.), ἀμυσχρός (α- priv.), ἀμφασίη (α- priv.), ἀμφί (*mbhi, *ambhi?), ἄμφω (Lat. ambo).

III. (non-IE) Άμαζών, ἀμάρἄκον, ἀμία, ἀμιχθαλόεσσα (cf. ἀμυγδάλη p. 71), ἄμπελος, ἄμπυξ (ἄντυξ), ἀμυγδάλη, ἄμωμον.

IV. (no etym.) ἀμαιμάκετος, ἀμαλογία, ἀμάμαξυς, ἀμαμηλίς, ἀμάναν, ἀμάνδαλον, ἄμαξα, ἀμάρα, ἀμαρεῖν, ἀματα, ἄμβη, ἄμβιξ, ἀμβλίσκω, ἄμβων, ἀμέσω, ἀμεύσασθαι, ἀμήκωα, ἄμης, ἄμιλλα, ἀμνίον, ἄμοιος, ἀμόρα, ἀμορβός, ἄμοτον, ἀμπλακίσκω, ἀμπρόν, ἀμυδρός, ἄμυλος, ἀμύνω, ἀμύς, ἄμφην, ἄμωτον.

V. (unreliable) ἄμαλλα, ἀμαρύσσω, ἀμείνων, ἀμύσσω (Lat. mucro), ἀμώσας.

VI. ἀμαλδύνω has cognate forms without ἀ- in *βλαδύς (βλαδεῖς) βλαδαρός. These include Skt. $mrd\acute{u}$ -, Lat. mollis (<*mldui-). Arm. melk (<*meldui-) has no prothetic vowel. It thus seems probable that the basic form had no laryngeal and that the ἀ- is of more recent origin; see Frisk, I 84. On the other hand, the difference in treatment of the sonant ($\alpha\lambda$: $\lambda\alpha$) could be a consequence of the difference in structure between * $\hbar_2 mldu$ - and *mldu-. If the stem is cognate with μέλδομαι: ἀμέλδειν, we would have a parallel there; for a possible explanation of this see p. 85 ff.

 $\mathring{\alpha}\mu\alpha\lambda\acute{o}\varsigma$. There is insufficient reason to speak of a prothetic vowel.

άμαρτάνω, cf. ναμερτής, p. 109.

ἀμαυρός beside μαυρόομαι. As with the other words for 'weak', introduction of an (unmotivated) α-privative must be reckoned with. On the other hand, allowance must also be made for the possibility that this word (-αυρος) is non-IE.

ἀμάω as against OHG māen, OE māwan has a prothetic vowel; PIE * \hbar_2 me \hbar_1 -/ \hbar_2 em \hbar_1 -. The Germanic forms point to * $m\bar{e}$ -; one would therefore expect *ἀμέω instead. The ἀ- may partly go back to \hbar_2 e-. In ἄμητος as against MHG māt one can speak of a prothetic vowel, if from * \hbar_2 m \hbar_1 tós (for the development of \hbar_2 m \hbar_1 - see p. 95); the form may, however, be recent.

 \mathring{a} μείβω. The connection with Lat. *migrare* remains highly hypothetical. A form * \hbar_2 mei- b/g^u - is in itself highly feasible.

ἀμέλγω as against OE melcan, etc., may be *h₂melg-.

ἀμέργω (not cognate with ὀμόργνυμι, see p. 71) has no cognates. The structure permits of * $\hbar_2 merg$ -.

ἀμέρδω (Skt. márdati 'to rub to pieces, press'?); Hsch. μέρδει and μερθεῖσα στερηθεῖσα, see p. 85.

άμολγός is unexplained.

Conclusion. — A great deal is uncertain here. Laryngeal is probable for ἀμάω, prothetic vowel in ἁμαρτάνω and ἀμέλγω, and possible according to the structure in ἀμείβω, ἀμέργω, ἀμέρδω, ἀμολγός; further ἀμαλδύνω.

h. εμ-

I. (elsewhere) ἐμβάδες ἐμμαπέως 2. ἔμπαιος ἔμπεδος ἔμπειρος ἐμπλατία ἔμπλην ἐμποδῶν ἐμπολή ἔμπορος ἐμπυριβήτης ἔμφωτον s.v. ἔν.

II. (no proth. vowel) ἐμέω (Skt. vámiti).

III. none.

IV. (no etym.) 1. ἔμπαιος, ἔμπης, εμπουσα, ἐμύς.

V. (unreliable) ἐμπάζομαι, ἐμπίς.

VI. $\grave{\epsilon} \mu \acute{\epsilon}$: $\mu \epsilon$ cannot be put on a par with other cases, as emerges from Hitt. ammuk, Alb. im (whilst Albanian does not have a prothetic vowel) and because the forms with and without $\grave{\epsilon}$ - occur side by side; cf. also Frisk s.v. Cowgill's suggestion (p. 170) that $\grave{\epsilon} \mu \acute{\epsilon}$ is dissimilated from *meme is not convincing, and even less his view that $\grave{\epsilon} \mu \acute{\epsilon} \varsigma$ continues both *memos and *mos with prothetic vowel (in the strict sense).

i. ομ-

- I. (elsewhere) όμηγερής s.v. όμός; όμηγερέω s.v. ὅμηρος; όμόγνιος s.v. ὁμός; ὁμοίιος s.v. ὄμνυμι.
- II. (no proth. vowel) ὁμαλός (s-), ὅμμα (* ok^u -, Goth. ahma), ὁμός (s-), 1. ὀμφή (Goth. siggwan), 2. ὀμφή (ON anga "to smell" (trans. and intr.), * ong^uh -).

III. (non-IE) ὄμφαξ.

IV. (no etym.) ὁμάζω.

V. (unreliable) ὅμαδος, ὁμαρτέω (s-?), ὅμβρος (not cognate with νέφος, see p. 74), ὅμηρος, ὅμῖλος (s-?), ὁμοκλή (ὅμνυμι?), ὅμπνη.

VI. ὀμείχω, Skt. meha-, etc., has beside it ἀμῖξαι οὐρῆσαι Hsch. If the connection with μοιχός 'adulterer' is correct, this would give a problem; see p. 74 ff. Cf. Arm. mēz 'urine', mizem 'urinate', p. 22.

ở μίχλη, Skt. meghá-; for Arm. mēg see p. 22. (Not cognate with ἀμιχθαλόεσσα, see p. 71).

ὄμνυμι from *ħ3emħ3-, p. 131.

ο μ ό ρ γ ν υ μ ι as against Skt. márjmi mrjánti 'to wipe off' may have * \hbar_3 mer \hat{g} -. The form ὀμόργνυμι cannot be old. Skt. mr-n-ák-ti has the old nasal present; cf. ὀρέγνυμι ὀριγνάομαι: Skt. r-ñ-jati. In mr-n-ák-ti < * \hbar_3 mr-n-e \hat{g} - the laryngeal could be compared with the s- in σκίδνημι. This form would have given * ∂ μαρ-ν-εγ- in Greek. Όμαρξον in Hesychius has zero grade (cf. Skt. amrkṣat). If assimilation is rejected, the o-vocalism of ὀμόργνυμι is not explained. One might envisage a phonetic development in * \hbar_3 mrC-> ὀμορC-, whereby the laryngeal determines the colour of the vowel developing from the sonant, but this development is improbable on account of ὄμαρξον (or confined to certain dialects). There is no reason to assume o-vocalism in Skt. (aor.) amārkṣīt, as the formulation in Frisk suggests. On the other hand original o-vocalism is possible in the root present, to which Skt. márjmi points (p. 131 n. 60).

 $\delta \mu \varphi \alpha \lambda \delta \varsigma$, Lat. umbo umbilicus, as against Skt. nābhi- etc., points to *enbh-(onbh-)/nebh- or * \hbar_3 enbh-/ \hbar_3 nebh-. The δ - cannot be called prothetic. Szemerényi, Syncope, pp. 238-49, tries to explain all the forms by paradigmatic ablaut *nebh-/ η bh-. He naturally admits the existence of the ablaut type *(\hbar)enbh-/(\hbar)nebh-, but posits that such a change did not occur in "ready-made words". The explanations which Szemerényi thus finds himself obliged to make are, however, forced. For instance, he says that Lat. umbo stands for *ombo < *embo < * η bh-, a form to which OIr. imbliu may also go back. Ομφαλός is said to have been formed by syncope from * δ vo φ αλος. The δ - in this word is then a prothetic vowel in the true sense of the word. However, there is nothing that points to this form and the syncope is in itself highly improbable. For the structure compare δ ρ φ ανό ς , for which all cognates point to full grade. Cf. s.v. ὄνυξ.

Conclusion. — "Ομνυμι (ὀμώμοκα) has ħ₃. Prothetic vowel is probable in ὀμείχω ὀμίχλη ὀμόργνυμι.

j. αν-

Ι. (elsewhere) ἀνακῶς ἀναλίσκω ἀναρριχάομαι ἀνασταλύζω ἀνασυρτόλις (?) s.v. ἀνά; ἀνδράποδον ἀνδρεϊφόντη Ἀνδρομάχη s.v. ἀνήρ; ἀνήνοθεν ἀνοκωχή s.v. ἀνά; ἀντάτας ἀντηρίς ἄντησις ἀντί ἀντιάνειρα ἀντικρύ s.v. ἄντα; ἄνωγα s.v. ἀνά.

II. (no proth. vowel) ἄν (Lat., Goth. an), ἀνά (Av., Goth. ana), ἄναλτος (α- priv.), ἀνδάνω (su-), ἄνθος (Skt. ándhas-), ἄνυμι (Skt. sanóti).

III. (non-IE) ἄναξ, ἀνθρηδών¹², ἄνθρυσκον, ἄνθρωπος¹², ἄντυξ.

¹² Kuiper, Μνήμης χάριν. (As another instance of the interchange prothetic vowel/reduplication in words of the substratum language discussed in this article must be considered ἄγλις/γέλγις 'head of garlic', on the assumption that the latter form stands for *γε-γλις. An exact parallel for this metathesis is not known, as far as I see, but $\tau \kappa > \kappa \tau$ and $\tau \pi > \pi \tau$ (Lejeune, *Traité*, p. 59 f.) probably rests on the same principle that the more open sound comes first, and may have been prompted to avoid the group γεγ-. That the word is a substratum word appears, apart from ἀ-/γε-, also from the suffix - $\bar{\tau}$ 9-/- $\bar{\tau}$ 6- (for - τ 9- beside - τ 7- see Kuiper's article, p. 216 ff.) and the meaning.)

- IV. (no etym.) ἀναγαλλίς, ἀνάγκη, ἀνάγυρις, ἀναλεῖ, ἀναστίδωνος, ἄναυρος, ἄνδηρα, ἄνδινος, ἀνδράχνη, ἀνενετεῖ, ἀνέω, ἄνηθον, ἀνιγρός, ἀνόπαια, ἀντακαῖος, ἄντρον.
- V. (unreliable) ἀνεμώνη (ἄνεμος), ἄνευ (Germ. * \check{e} -nu), ἀνθίας, ἀνίη, ¹³ ἄνται (ἄνεμος), ἄντλος (Lat. sentina), ἀντόμους (ἀνατέμνω).

VI. $\ddot{\alpha}$ ve μ o ς , Lat. animus, Skt. ániti, from the stem * \hbar_2 en \hbar_1 -, p. 229.

ἀνεψιός as against Av. naptya-; * \hbar_2 nept-. (Νέποδες is not cognate, p. 105 f.) ἀνήρ, Arm. ayr (Hitt. innar-, Luw. annar-?) have prothetic vowel as against Skt. nar-, Ital. ner-. Δρώψ and ἄνθρωπος do not belong here. ^{13a} See further p. 75.

ἀννίς has laryngeal if connected with Hitt. hannas, Arm. han 'grandmother'. ἄντα is cognate with Hitt. hanza.

Conclusion. — In ἄνεμος ἀννίς ἄντα laryngeal is probable, but there is no reason to speak of prothetic vowel; this is found in ἀνεψιός and ἀνήρ.

k. εν-

- Ι. (elsewhere) ἔναγχος ἐναντίβιον ἐναργής ἕναυλος (1., 2., 3.) ἐνδάπιος *ἔνδινα ἔνδιος ἔνδον ἔνδορα ἔνδρυον ἐνδυκέως ἐνεῖκαι ἕνεκα s.v. ἔν; ἐνενήκοντα s.v. ἐννέα; ἐνετή ἐνέωρα ἐνηής (?) ἐνηρόσιον ἔνθα (?) 2. ἔνθινος ἐνθουσιάζω ἐνθύσκει ἐνῖπή ἐν(ν)έπω ἐννέσιαι ἐννότιος ἐνόπαι ἐνοπή ἐνοργείας ἐντελέχεια ἐντός ἐντροπαλίζομαι ἐνώδιον ἐνῶπα s.v. ἔν.
- II. (no proth. vowel) ἕν (*en; OCS on-<*on?), ἕνη (Hitt. eni-, anni-, OCS onδ), ἕννυμι (*μes-), ἕνος (Skt. sána-), ἕντερα (Skt. ántara-, Lat. inter).
 - III. (non-IE) Ἐνυάλιος.
 - IV. (no etym.) ἔνελος, ἐνεός, ἐντυπάς.
 - V. (unreliable) ἔναρα, ἐνιαυτός, ἔνιοι, ἔντεα.
- VI. ἐνεγκεῖν from the stem * $\hbar_1 ne\hat{k}$ -/ $\hbar_1 en\hat{k}$ -; cf. ἐνήνοχα, p. 118. The stem form *ἐνεκ- < * $\hbar_1 ne\hat{k}$ in -ηνεκής. For the connection with Hitt. ninink- 'to lift up' see p. 93.

ὲνθεῖν from the stem * \hbar_1 endh-/ \hbar_1 nedh-; cf. ἐνήνοθε p. 118. (Frisk's ἐνεθ-/ἐνοθ-/
ἐνθ- is possible only if the ἐ- of ἐνεθ- is a prothetic vowel, for otherwise one may reckon only with the forms *nedh-/endh-: PIE *enedh- is impossible.)

ἐννέα. As Arm. inn also begins with a vowel, it is obvious to regard the initial vowel of both words as prothetic vowel as against *neun elsewhere. The form * $\hbar_1 n(e) \mu n$, however, explains neither ἐνενη- nor ἐννέα without more ado. The problem is discussed in detail by Szemerényi, Syncope, pp. 107-44. Greek has beside *ἐν(ν)εϝα a form *ἐνϝα- in compounds. The latter will therefore have caused the double νν of ἐννέα (but -νϝ- > -νν- is far from sure; cf. p. 248 and Lejeune, Traité, p. 137 n. 1). Szemerényi disclaims an ablaut * $\hbar_1 neu$ -/ $\hbar_1 enu$ -, cf. s.v. ὀμφαλός, p. 44. He further

¹³ Against connection with Skt. ámīvā- Kuiper, AION (1959) 157-65.

¹³a See note 12.

disclaims that Arm. inn can come from * $\hbar_1 enun$, since this would have become *ing (on account of cung-<*gonu-, Meillet, Esquisse², p. 84). It is, however, the question whether the development in this position would have been the same. He is of the opinion that *eneun would have given Arm. inun-(*eneun > *inowan > *inoun > inun), which functions as the stem of the oblique cases, while the parallelism tasunk' (plural of 'ten') inunk' would have yielded the form inn beside tasn. I am not in a position to assess that. Both ἐννέα and inn would then go back to *ħ₁neun. Szemerényi explains the form evfa- by syncope from *evefa. He believes that support for this may be found in Myc. enewo(peza), 'enewo-'. In Homer the forms with ἐνγα- are evidently older than those with ἐννεα- (-βοιος etc.), and therefore one would have expected *enwo- (written *e-nu-wo or *e-no-wo-) in Mycenaean if ἐνγα- had already existed then. Evidently, therefore, the syncope took place after the Mycenaean era but before Homer. However, it seems strange to me that the syncopated form, which has had such an influence, did not come into being until after 1200 B.C., but had already disappeared again from the living language at the time when the Iliad and the Odyssey were put in their final form. Consideration should be given to the possibility that ἐνρα- goes back to the zero grade * $\hbar_1 n \mu$ -: the sonant develops into VC (cf. * $\hbar_2 r \hat{g} r \hat{o}$ -> ἀργ(ρ)ός, p. 34), the colour of the vowel is determined by the laryngeal. In compounds zero grade is to be expected.

A particularly awkward case is ἐνενήκοντα. Szemerényi's solution is not convincing, * $(\hbar_1)neu\bar{\eta}konta$ > *ἐνευνᾶκοντα, by analogy *ἐνεγανᾶκοντα, by syncope *ἐνγανᾶκοντα > ἐνενήκοντα.

ἕνοσις perhaps *(\hbar_1)en \hbar_3 -; see p. 231.

Conclusion. — Ἐνήνοθε and -ηνεκής (ἐνήνοχα) have laryngeal. Prothetic vowel is also probable in ἐννέα.

1. ov-

I. (elsewhere) ὄναλα s.v. ἀνά (?); ὄνειαρ s.v. ὀνίνημι.

II. none.

III. (non-IE) ὄνος.

IV. (no etym.) ὄνθος, ὀνθυλεύω, ὄνιννος, 2. ὄνυξ.

V. none.

VI. ὄναρ, Arm. anurj. The forms further known are ὄνειρος, Aeol. ὄνοιρος, Cret. ἄναιρον and ἄναρ and in Albanian Geg. ândërr, Tosc. ëndërrë. Armenian points to *ħnōr-io-, ὄνειρος to *ħ₃ner-io-; ὄναρ (ἄναρ) and ἄναιρον point to zero grade of the suffix, to which the Aeolian form will also go back. This suggests an inflexion nom. $-\bar{o}r$, acc. $-\acute{e}r$ - ηn , gen. -r- $\acute{o}s$ (cf. ἀνήρ). Less clear is the form of the stem. For ὄναρ *ħ₃nr is possible (in the oblique cases *ħ₃nr- before consonant, *ħ₃nr- before vowel, gen. *ħ₃nr\acute{o}s, loc. pl. *ħ₃nrsí), but Albanian would suggest *ħ₃enr-, p. 20.

ὄνειδος, Arm. anicanem as against Goth. ga-naitjan 'to revile' (cf. Goth. neiþ, Dutch nijd).

¹⁴ An exact parallel is Arm. awr < *ἄmōr, ἡμέρ-α, ἡμαρ.

ονίνημι ονίναμαι, Dor. ὄνασις, stem ονα- implies * h_3 ne h_2 -. Cf. p. 94, 130 n.

ὄνομα, Arm. anun as against Lat. nōmen etc. seems to suggest prothetic vowel. For ὄνομα this would have to be h_3 , but Lac. Ἐνυμακρατίδας with OPr. emmens points to PIE e-, which makes h_3 impossible. In that case there is no reason to assume h_1 . This is confirmed by the fact that in compounds like sa-nāman in Indian lengthening of the preceding vowel never occurs; see p. 93 f. Szemerényi, Syncope, p. 244 f., disclaims the value of the Old Prussian form, but without strong arguments (see p. 230 n. 115). His explanation of the Greek forms (his p. 244 n. 3) is unacceptable: prothetic vowel (in the strict sense of the word) ἀ- with assimilation to ὄνομα and in other dialects dissimilation (from *ἄνομα) to *ἔνομα/ἐνυμα-. According to Hamp (see p. 21 f of this book and Evidence, p. 138), the Albanian forms suggest zero grade, since in his opinion diphthongization of PIE e- to je- ja- occurred, cf. jam 'I am' (*esmi), $jasht\ddot{e}$ (ἑκτός), t- $jet\ddot{e}r$ (Umbr. etro-). See for further interpretation p. 229 f. ὄνομα1 has no certain cognate forms. See p. 231.

ὄνυξ as against Skt. nakhá- etc. could go back to * \hbar_3 nogh-. The interpretation of Arm. elungn 'nail' is difficult. According to Meillet, Esquisse², p. 47, this developed from *e-nogh- with -n for words representing parts of the body (otn 'foot', unkn 'ear') and anticipation of this n (which was itself secondary), *enongn, and dissimilation to elungn. Frisk is of the same opinion. In this case prothetic vowel would be certain (although the timbre of Armenian is striking). Osthoff, Etym. Parerga, p. 280, explained *el-ungn* as a compound, 'Horn-nagel'; cf. *amis* p. 23. For *ung*- cf. Lat. unguis, which does stem from *-ongh (* \hbar_3 engh-). This would mean * \hbar_3 nogh-|* \hbar_3 engh-. Szemerényi, Syncope, p. 238-49, denies this and tries to explain Lat. unguis from *ngh-u->*engh-u->*ongh-u-15 (supported by OIr. ingen < ngh-uina. However, this development is not plausible for Latin; cf. s.v. ὀμφαλός p. 44. Skt. anghri-'foot' will not belong here (Mayrhofer, I 545). Hitt. šankuiš is also obscure; it is conceivable that the form has s movable before laryngeal, but the group $s\hbar$ is preserved in Hittite and gets prothetic vowel at the beginning of the word, ish-, see p. 82. "Ονυξ will therefore be based on * $h_{3}nogh$ - with dissimilation o-o > o-v (cf. ω -o > ω -v¹⁶ s.v. ορέγω p. 37 f.) and in addition o > v in the vicinity of labial sounds, $v\dot{v}\xi < *nok"$ -, πρυμνός < *προμνος; cf. Cowgill, Evidence, pp. 156 f. With a reduced grade $*h_3n_egh$ the υ is even more difficult to explain (one expects *οναχ-, unless one assumes that * $\hbar_3 n_e gh$ - became * δ vo χ - phonetically). 17

Conclusion. — Many words present special difficulties. Prothetic vowel is probable for ὄνειδος ὄνειρος ὀνίνημι ὄνυξ.

¹⁵ If the form originally had a laryngeal at the beginning, one would in my opinion expect from *ħnghu- in Latin the form *angu- (for the influence of laryngeal on the vocalic sonant in Latin see p. 133).

¹⁶ Compare the compounds with -ῶνυξ and -ώνυχος, e.g. γαμψῶνυξ, κρατερῶνυξ (II.).

¹⁷ As appeared above (p. 44), it is, however, improbable that * $\hbar_3 m_{\tilde{t}}$ - became ὀμορ-, on account of ὅμαρξον; thus * $\hbar_3 n_e C$ - \gt ονο C- is even less likely.

m. α-

 I. (elsewhere) άβροτάζω¹⁸ s.v. άμαρτάνω; Άγαμέμνων άγανακτέω άγάννιφος s.v. άγα-; ἀγελή s.v. ἄγω; ἀγήνωρ s.v. ἀγα-; Άγησίλας s.v. ήγέομαι; Άγλαυρός s.v. άγλαός; άγνός s.v. ἄγιος; ἄγνυμι (αF); άγορά s.v. ἀγείρω; άγρήσκεται ἄγρυπνος άγρωστις s.v. ἀγρός; άγυια s.v. άγω; άγχι ἀγχίλωψ s.v. άγχω; ἀδαγμός s.v. ὀδάξ; ἄδδαυον s.v. ἄζα; ἀδνόν s.v. ἁγνός; ἀδρός s.v. ἄδην; ἄεθλος ἀείδω ἀείρω ἀέλιοι ἄελλα ἄεσα (αϝ); ἀεσίφρων s.v. ἀάω; ἀηδών ἄημι ἄήρ (αϝ); αἰγίλωψ s.v. αἰγειρος (?); αίγίς s.v. αἴξ; αἰετός (αρ); αἰθάλη αἰθήρ s.v. αἴθω; αἴκλοι s.v. αἰχμή; αἰπόλος s.v. αἴξ; αἶσα αἰτέω αἴτιος s.v. αἴνυμαι; αἴφνης s.v. αἴψα (?); αἰσθάνομαι (αρ); ἀΐω s.v. αἰσθάνομαι; αἰών s.v. αἰέν; ἀκαίνω ἀκαχμένος s.v. ἀκή; ἀκέων s.v. ἦκα (?); ἀκμή ἀκόνη ἀκρūής ἄκρος ἄκωνs.ν. ἀκή ; ἀολλής (αϝ) ; ἄορ s.ν. ἀείρω ; ἀπεράω ἀπηνής (?) ἀποδιδράσκω ἀπόθεστος ἄποινα ἀπόκυνον ἀπολαύω ἀπολεῖν[α] ἀπόμελι ἀπούρας ἀποφράς ἀποχειροβίοτος s.v. ἀπό; ἄστυ (αϝ); ἀτμός s.v. ἄημι; ἀτρακίς s.v. ἄτρακτος; αὐαψῆ s.v. αὖος; αὐδή s.v. ἀείδω; αὐερύω s.v. ἀνά; αὐθάδης s.vv. αὐτός and ἁνδάνω; αὐθέντης s.vv. αὐτός and ἄνυμι; αὖθι s.v. αὐτός; αὐλή s.v. ἄεσα; αὔξω s.v. ἀέξω (αϝ); αὔριον s.v. ἕως; αὐτίκα s.v. αὖ; ἀϋτμή s.v. ἄημι; αὐτόδιον αὐτοκράτωρ αὐτόματος s.v. αὐτός; αὐχμός s.v. αὖος; ἀφαδία s.vv. ἀπό and ἀνδάνω; ἄψορρος s.v. ἄψ.

ΙΙ. (no proth. vowel) ἄατος (α- priv.), ἀβλοπές (α- priv.), ἀγκ- (Skt. anc-), ἀγρός, ἄγχω, ἀδαής (α- priv.), ἀδελφεός (α- copul.), ἀδευκής (α- priv.), ἀδήν (η-), ἄδην (s-), ἀδίαντον (α- priv.), "Αδραστος (α- priv.?), ἀζηχής (α- priv.), άθρόος (sη-), αἰάζω (interj. αἶ), ἀἴδηλος (α- priv.), αἰεί (Skt. ἀyu-), ἀϊκής (α- priv.), αἴλινος (interj.), αἴ-νυμαι (*ai-), αἴξ (*aig-; cf. p. 128), αἰχμή (*aik-), ἀκαρός (η-?), ἄκαστος (acer? ΙΕ?), ἀκή (*ak-?), 1.2. ἀκήρατος (α- priv.), ἄκνηστις (false word division), ἀκοίτης (α-copul.), ἄκμων, ἀκόλουθος (α- copul.), ἀκοστή (Lat. acus?), ἀκράχολος (α- priv.), ἄξων, ἄοζος (α- copul.?), ἄορον (sη-), ἀσσεέω (sη-), ἄπαξ (sη-), ἀπειρέσιος (α-priv.), ἀπλόος (sη-), ἀπό (Skt. άρα etc.), ἄσβεστος (α- priv.), ἀστηρής (α- priv.), ἀσπερχές (α- intens.), ἄσπετος (α- priv.), ἀστηνος (α- priv.), ἀστραβής (α- priv.?), ἀσχέδωρος (ἀνά), ἀτάρ (Lat. at), ἀτάρβακτος (α- priv.), ἀτάσθαλος (α- priv.), ἀττρύγετος (α- priv.), ἀτύζομαι (Hitt. hatugi-?), αἴ (au), αὐλός (aul-, IE?), αἴος (s-), ἀφαμιῶται (α- priv.), ἀφλοισμός (α- copul., or anal.), ἀφόρδιον (young), ἀχην (p. 129), ἀχλύς (OPr. aglo), ἄψ (Lat. abs).

ΙΙΙ. (non-ΙΕ) ἄβαξ, ἄβιν, ἀβολεῖς, ἀβόλλης, ἀβρυτοί (ἄμβρυττοι, βρύττος), ἀβυρτάκη, ἀγάλοχον, ἄγγαρος, ἄγγελος, ἄγγος, ἀγέρδα (Mac.), ἀδάρκη, ἀδῆ (Mac.), ἀδαρκία (Mac.?), Ἄδωνις, ἀθάρη, Ἀθήνη, ἀθήρ (ἀνθ-), αἰδωσσα, ἀκακαλίς, ἀκακία, ἀκαλήφη, ἄκανθα, ἀκῖνάκης, ἄκολος (?), ἄκριστιν, ἄκυλος, ἀπήνη, ἄπιον, Ἀπόλλων, ἀσάμινθος, ἄσαρον, ἄσιλλα, ἀσίρακος, ἀσκάλαβος, ἀσκάλαφος, ἀσκαλώνιον, ἀσκαρίς, Ἀσκληπιός, ἄσκρα, ἀσπάλαξ, ἀσπάλους, ὰστακός (see p. 51 s.v. ἀστράγαλος), ἀστράβη, ἀσύφη, ἀσφόδελος, ἀτάλυμνος, ἀτράφαξυς, ἀττηγός, αὐροσχάς, αὐχήν (Aeol. ἄμφην), ἀχαρνώς, ἀχάτης, ἄχερδος, ἀχερωῖς, ἀχράς, ἀψίνθιον.

¹⁸ Cf. also Ruijgh, L'élém. ach., p. 74.

IV. (no etym.) ἀάατος, ἀάζω, ἀάνθα, ἄαπτος, ἀάω, ἄβα, ἄβαγνα, ἀβακής, ἀβάντασιν, ἀβαριστάν, ἀβαρύ, ἄβεις, ἀβήρ, ἀβλαδέως, ἀβριστήν, ἁβρός, ἁβρότονον, άβυδόν, ἀγαθίς, ἀγάλλομαι, ἀγανός, ἀγαπάω, ἀγαρικόν, ἀγαυός, ἀγαυρός, ἄγγουρα, ἀγερώχος, ἀγέτρια, ἀγλαός (not cognate with γαλήνη), ἄγλῖς, ἀγλύεσθαι, ἄγνος, ἀγνύς, ἄγχουσα, ἀδαλός, ἀδημονέω, ἀδίκη, ἄδις, ἀδολέσχης, ἄεμμα, ἄεπτος, ἀερόπος, ἄζετον, ἄζον, ἀήσυλος, ἀθερίζω, ἀθραγένη, ἀθρέω, αἶα, Αἴας, αἴγειρος, αἰγιαλός, αἰγίθαλλος, αἰγίλιψ, 1.2. αἴγλη, αἰγωλιός, αἰζηός, αἴητος, αἰκάζει, αἰκάλλω, αἶκλον, αἵμων, αἶνος, αἰνός, αἰονάω (cf. p. 95), αἶπος, 1.2. αἶρα, αἰρέω, αἴσακος, αἰσάλων, ἀΐσθων, αἴσυλος, αἶψα, ἀκαλαρρείτης, ἄκαρον, ἄκασκα, ἄκατος, ἀκιδνός, ἀκιρός, ἀκκώ, ἄκμηνος, ἀκόνῖτον, ἄκορνα, ἄκορον, ἀκραιφνής, ἀκρεμών (beside κρεμών Eratosth.), ἀκριβής, ἀκρίς, ἀκτέα, 1.2. ἀκτή, ἀκτηρίς, ἀκτίς, ἁπαλός, ἀπαργία, ἀπαφίνιον, ἄπαφος, ἄπελος, ἀπολάντιον, ἄππα, ἀπροξίς, ἄπτω, ἀπυλιῶναι, άπφα, ἀσαλής, ἄσβολος, ἀσελγής, ἀσκάντης, ἄσκαρος, ἀσκελής, ἀσκέρα, ἀσκέω, ἀσκός, ἄσκυρον, ἀσκώλια, ἀσπάζομαι, ἀσπάλαθος, 1.2. ἀσπίς, ἄσπρις, ἀστραβδα, ἀσύφηλος, ἀσχίον, ἀταβυρίτης, ἀταρτηρός, ἀτέων, ἄτη (ἀϝα-?), ἀτμήν, 1. ἄττα, ἀτταγᾶς, ἀττάκης, ἄττανα, ἀττάραγος, ἀττέλαβος, αὐκήλως, αὖρι, αὐροί, αὐτός, αὐχέω, ἄφαρ, ἀφάρκη, ἀφαυρός, ἀφελής, ἀφήτωρ, ἄφθα, ἀφία, ἀφίας, ἄφλαστον, ἄφνω, ἄφρα, ἄφρισσα, Άφροδίτη, ἀφρός, 19 ἀφύη, ἀφυσγετός, ἀφύσσω, ἀχαίνη, άχαΐνης, Άχαιοί, άχάλιον, άχάνη, ἄχθομαι, Άχιλλεύς, ἄχωρ, ἀών.

V. (unreliable) ἀβέλτερος (α- priv.), ἀβολέω (young), ἀγα- (Αν. αš-?), ἀγήρατον (α- priv.), ἄγιος (i-), ἄγος, ἄγρα, ἀδάμας, ἀδάρεξα, ἀδμωλή, ἄδρυα (sm-), ἄζω, ἄητος, ἄθρας, ἀθύρω, αἰανής, αἰγανέη, αἰγυπιός, "Αιδης (α- priv.), αἴδομαι, ἀΐδυλος, αἰέλουρος (cf. p. 95), αἴμα, αἰμασιά, αἰμύλος, αἰμωδέω, αῖνω²ο, αἰόλος (cf. p. 95), αἰσυμνάω, αἴσχος, ἀΐτης, ἀκάκητα, ἄκανος, ἀκαρής, ἄκος, ἀκροάομαι, ἀκταίνω, ἀξίνη, ἄξιος, ἀπάτη, ἀπαφίσκω, ἀπελλαι (ἀπειλή), ἀποφώλιος (ἀπαφίσκω), ἀπρίγδα (α- intens.), ἀπτερέως (α- copul.), ἀπτοεπής (α- priv.), ἄσαι, ἄση, ἄσθμα, ἄσις, ἄσμενος, ἀσπιδής, ἄσπληνον (α- priv.), ἀσυρής, ἄσφαλτος (ΙΕ?), ἀσχαλάω, Ἀταλάντη, ἀταλός, ἀτέμβω, "Ατλας, ἀτραπός (α- copul.), ατροπανπαις, ἄττομαι, αὺγή, αὐίαχοι (α- copul.), 2. αὖω (αus-), ἀφάκη, Ἀχέρων, ἄχνη, ἄχνυμαι, ἀχρεῖον, ἄχρι (m-?), ἄχυρον, ἁψίς (ἄπτω), 1. ἄωροι (α- priv.), ἄωρος, ἀωτέω, ἄωτος.

VI. $\dot{\alpha}$ βληχρός (Hom., beginning of the verse) as against βληχρός (everywhere else). In opposition to the idea of Leumann, *Hom. W.*, p. 55, that βληχρός arose from false word division, it must be stated that it is not probable that a passage unknown to us would have had so much more influence than the Nekyia. Compare the words s.v. ἀμαλδύνω p. 42, which have the same meaning.

 $\dot{\alpha}$ γ α θ ό ς, Hsch. $\dot{\alpha}$ καθόν and χάσιος, may be non-IE, because of the different forms. $\dot{\alpha}$ γ ε ί ρω has no cognate forms outside Greek. The connection with γέργερα πολλά Hsch. and γάργαρα is not obligatory. The structure suggests * $\hbar_2 ger$ -.

Not connected with Arm. p'rp'ur, where one would also expect a prothetic vowel. But cf. n. 12. The etymology that connects αῖνω 'to winnow' with ἄημι and explains it from *Hwənyō (i.e. *ħ₂uħ₁niō?) — still repeated by Crossland, Arch. Ling. 10 (1959) 84 — is neither formally nor semantically of any value. Cf. Cowgill, p. 161.

ἀγοστός is compared with Skt. hásta- 'hand' and OCS grosto 'handful'. 'Άγείρω has also been brought in here, which is rather meaningless semantically. The form ἀγοστ- suggests *ἀγορ-, *ἀγοσ- or a stem ending in dental, the first of which would correspond to the Old Church Slavonic form. The explanation of the h- of Sanskrit by metathesis of the laryngeal, * $\hbar_2 g_- > *g\hbar_2$ -, is an arbitrary one.

ἀγρεῖφνα ἀγριφή 'harrow' goes with γριφᾶσθαι' γράφειν. Λάκωνες, οἱ δὲ ξύειν καὶ ἀμύσσειν Hsch. No etymology. Non-IE?

ἄγω Lat. ago etc. must be * $\hbar_2 e\hat{g}$ -; cf. p. 128.

 $\dot{\alpha}$ θ έλγειν (also β, δ instead of γ) is unexplained. An interpretation * \hbar_2 dhel- is possible, but the varying forms could point to a non-IE word; see p. 193 f.

αἴθω points with ἰθαρός to $*h_2(e)idh$ -; see p. 129.

αἰώρα. To be able to link this with ἀείρω one has assumed for αἰωρ- a basic form * \hbar_2 ei- \hbar_2 μer-, dissimilated from * \hbar_2 μei- \hbar_2 μer (from * \hbar_2 μer- \hbar_2 μer-), which is highly hypothetical. See p. 95.

ἀκούω ἀκεύει beside Goth. hausjan suggests * $\hbar_2 ke/ou$ -, which may be confirmed by ἀκήκοα and νηκουστέω. Here κοέω would form a problem, but θυοσκόος, OHG scouwon, OE sceawian etc., suggests *(s)keu-. These forms must probably be kept separate from ἀκούω and connected with Skt. kavi- as 'to survey, see'.

alpha π ϵ ι λ $\dot{\eta}$. If a stem with the meaning 'to proclaim solemnly, with emphasis', cognate with Latv. pelt 'to revile' and Goth. spill etc., Arm. (ara-) spel, may be taken as starting point, * \hbar 2pel- and *spel- would seem to stand beside one another; see for this p. 85 f.

ἀσκαρίζω (Hp.) stands against σκαίρω (Il.). No reliable etymology; perhaps of foreign origin.

ἀσπαίρω (II.), ἀσπαρίζω (Arist.) beside σπαίρω (Arist.) can hardly be separated from the widespread group to which Lith. *spiriù*, Lat. *sperno*, Skt. *sphuráti* belong. There are many difficulties of detail which must perhaps be ascribed in part to the expressive character of these words. Contamination with the preceding is feasible. Nor may the possibility of foreign origin be excluded.

ἀσταφίς ὀσταφίς σταφίς 'dried grape'. Like the cognate σταφυλή, the word seems to be a substratum word.

ἄστα χυς στάχυς 'ear of corn'. The connection with OIcel. stinga etc. 'to sting' is not semantically obligatory. If a stem without nasal *stegh-, Lith. stegerỹs (stãgaras) 'withered stem of a plant' belongs here, non-IE origin must be considered for *stegh-| stengh (Centr. Eur.?). Cf. Boisacq s.v. στάχυς and Feist s.v. us-stagg.

The α- of α στεμφής may be called copulative-intensive or privative. The word has been compared with στέμβω, cf. also αστέμβακτος = αστεμφής. If this is correct, the interchange β/ϕ points to a substratum word. This is all the more probable for στέμβω, since στεμβάζειν and στοβάζειν (plus still other forms), both of which are defined by glossographers as λοιδορεῖν, suggest stem forms stob-/stemb-. Finally, the meaning of ατέμβω seems the same, cf. ατέμβιος· μεμψίμοιρος EM (but see Leumann, Hom. W., p. 33). For αστ-: στ- see p. 72. For στ-: ατ- cf. (σ)κιμβάζω: ὀκιμβάζω.

(I have grave doubts about στέμφυλον 'mass of olives from which the oil is pressed' taken with this).

ἀστήρ, Arm. astl stands against *ster- (Ind.-Ir., Toch., Lat., Celt. and Germ.). ἀστεροπή στεροπή (Il.) beside ἀστραπή (Hdt.), ἀστράπτω (Il.) and στορπά ἀστραπή. Πάφιοι Hsch., Στορπαῖος. A connection between ἀστραπή and ὀπ- (* $\hbar_3(e)k^\mu$ -) 'to see' is impossible. The vocalic interchange is difficult to explain, as is the absence of the prothetic vowel. One must therefore assume non-IE origin. Ἀστεροπή is perhaps secondary, the product of popular etymology.

ἄστλιγξ (Philet. ap. Sch. A.R.), ὄστλιγξ (Call.), see p. 72.

ἀστράγαλος. Of the words compared, ὅστρακον 'shell' (h. Merc., A.), 'potsherd' (inser. IV B.C.) is eligible in the first place. The formation (ost-r-k + αλ-, Frisk) is, however, strange for an IE word; nor can the interchange κ/γ be explained and α-/ο- has its parallel in words that are of Mediterranean origin. The two words may be cognate with ὅστρειον 'oyster'. Finally ἀστακός/ὀστακός 'lobster' may also belong to this group, where the same interchange α-/ο- is encountered. The connection with ὀστέον must therefore be abandoned. See Add.

 $\dot{\alpha}$ στραλός has prothetic vowel if cognate with Lat. *sturnus*, OHG *stara*. But a form *(a)strnlo- is not very probable. Non-IE origin seems probable.

1 and 2 ἀ σ φ ά ρ α γ ο ς offer numerous problems. It is not clear whether a distinction must be made here between two words differing in origin. The correspondence in form and meaning (this is discussed in more detail on p. 197) of σφαραγέομαι, Skt. sphūrjati, Lith. spùrgas, must go back to an original identity. However, a difficulty is presented here by Gr. φ — Skt. ph, and further the interchange π/φ and the ἀ- in Greek, which might both be of non-IE origin. Contamination with a substratum word for asparagus, for instance (cf. for form and meaning — a plant name — ἀσφόδελος) should be considered. Hiersche's detailed discussion, Unters., pp. 158, 197 f., offers nothing new here.

ἄτρακτος beside Skt. tarku-'bobbin' could go back to a stem * $\hbar_2 terk^u$ -; however, I am not convinced of the correctness of this connection.

1. αὕω, ἀῦσαι has been connected with Lat. *iubilare*; therefore * \hbar_2 *iu-*? Ἰυγή is also difficult to connect with this.

ἄφενος has been compared with OIr. *imbed* 'abundance, riches, multitude' as *mbhen-es- and Skt. apnas- 'possession'; the φ must in the latter case have developed from *apsnos-, which leaves ἄφενος unexplained. Szemerényi, Syncope, pp. 144-8, compares Hitt. happinant- 'rich', which he regards as *op-en- from the root *op- in hap-zi 'il y a abondance', further Lat. ops (however, putting opulentus as *openent- on a par with happinant is unfortunate; cf. idem, Glotta 33 (1954) 266-82) and Skt. apnas- as *op-n-es-. This would suggest a root * \hbar_3 ep-. Even if this connection is possible, Gr. ἄφενος cannot be explained by it, neither the \dot{a} - nor the φ. Consequently Szemerényi assumes with Heubeck, Praegraeca (1961), p. 70, that it has been borrowed from an Anatolian language. Although it is a charming idea to assume that the Greeks took a word for 'wealth' from the country of Croesus, I do not consider this likely. In

itself the word may very well be Greek, cf. ὄφελος, ἔρεβος. This leads to the interpretation * $\hbar_2 bhenes$ -. Connection with εὐθενέω with a basic form * $\hbar_2 g^u hen$ - is not possible, since then one would expect *εὐηθεν-, cf. εὐηφενής II. The formation of ἀφνειός (II.) is unclear; it cannot have been derived from ἄφενος itself.

Conclusion. — Prothetic vowel is probably found in ἀγείρω ἀγοστός ἀθέλγειν ἀκούω ἀπειλή ἀστήρ ἄφενος. The words (ἀ)βληχρός ἀγρεῖφνα ἀσκαρίζω ἀσπαίρω ἀστεμφής ἀστραλός ἀσφάραγος ἄτρακτος αὕω are unclear. Ἀσταφίς ἄσταχυς ἀστεροπή ἄστλιγξ are definitely not IE; for the prothetic vowel in these words see p. 72.

n. e-

I. (elsewhere) ἐάν s.v. εἰ; ἑαυτοῦ s.v. ἕ; ἑβδομήκοντα s.v. ἕβδομος; ἐγγύη ἔγκαρος s.v. ἔν; ἐγκάς s.v. ἔγκατα; ἐγγύς Ἐγκέλαδος ἐγκίλλαφον ἐγκοακίσαι ἐγκλίς (?) ἐγκοιωταί ἐγκονέω ἐγκυτί s.v. ἔν; ἐγχεσίμωρος s.v. ἔγχος; ἐγχίδιον ἐγχόδια see Frisk; ἐδέατρος s.v. ἐλεόν; ἔδνα (εϝ); ἔδρα ἑδώλια ἔζομαι s.v. ἔδος; εἶδος εἴδωλον s.v. εἴδομαι; εἴδομαι (εϝ); εἴθε s.v. εἰ; εἰκάζω s.v. ἔοικα; εἴκοσι (εϝ); εἰκών s.v. ἔοικα; είλαμίδες είλεός s.v. είλέω; 1.2. είλέω (εϝ); 2. εΐλη (εϝ); είλόπεδον s.v. 2. εΐλη (?); εἰλυσπάομαι εἰλυφάω s.v. εἰλύω; εἰλύω s.v. εἰλέω (εϝ); εἴργω (εϝ); εἴρερον (εϝ); εἴρομαι s.v. ἐρευνάω; εἰς s.v. ἔν; εἶτα s.v. εἰ; ἑκάεργος s.v. ἑκών; ἕκαστος s.v. ἑκάς (?); Έκάτη ἑκατηβελέτης s.v. ἑκών; ἑκατόμβη s.v. ἑκατόν; ἐκεῖνος s.v. ἐκεῖ; ἐκεχειρία s.v. ἔχω; ἐκτός s.v. ἐκ; «Εκτωρ s.v. ἔχω; ἐκφλῆναι ἐκφλυνδάνω ἐξαίφνης ἔξαλος ἐξάντης ἔξαστις ἐξαυστήρ (?) ἐξαυτῆς ἐξεράω s.v. ἐκ; έξῆς s.v. ἔχω; ἐξιστων s.v. ἕξ (?); ἐξονομακλήδην ἐξουλή ἔξω ἐξώφακαι s.v. ἐκ; ἐπᾶλής ἔπαλπνος ἐπάντης ἐπαρετέω Ἐπάριτοι ἐπαυρίσκω 2. ἔπαφος ἐπεί ἐπείγω s.v. ἔπι; ἐπεσβόλος s.v. ἔπος; ἐπήβολος ἐπηγκενίδες ἐπηετανός ἐπήρεια ἐπήρετμος ἐπήτριμοι Ἐπίασσα ἔπιβδα ἐπιβουκόλος ἐπιεικής ἐπίεικτος ἐπιζαρέω ἐπιζάφελος ἐπίηρος ἐπίθυμβρον ἐπικάρσιος ἐπίκερας ἐπικοκκάστρια ἐπίκουρος ἐπιλᾶΐς ἐπιμήδιον επίνητρον 1. επίξενος επίξηνον επίορκος επίουρος επιούσιος επιπακτίς επιπατρόφιον ἔπιπλα ἐπίπλοον ἐπιπολῆς ἐπίρροθος ἐπισκύνιον ἐπίσσωτρον ἐπίσταμαι επίστιον (?) επισχερώ επιτάρροθος επίτεξ επιτηδές (?) επιτηλίς επίτυρον επιωγαί ἐπωτίδες ἐπφχατο s.v. ἔπι; έσμός s.v. ἵημι (?); ἔστε s.v. ἔν; ἐστώ s.v. εἰμί; ἔσχατος s.v. ἐξ (?); ἐτεός s.v. ἐτάζω; εὐᾶγής εὐδείελος εὐδία εὔεξος (εὐηγενής) εὐηφενής εὐθενέω s.v. ἐύς; εὐθυωρία s.v. εὐθύς; Εὕιος s.v. εὐάζω; εὐκραής s.v. ἐύς; εὔληρα (εϝ); εὐμαρής εὔοχθος εὐπέμπελος εὐπετής εὔριπος s.v. ἐύς; εὑρίσκω (εϝ); εὐρυάγυια Ευρυβάλινδος ευρυόδεια ευρύοπα s.v. ευρύς; ευρύς (εξ); Ευρυσθεύς s.v. εὐρύς; εὐσωπία εὐτράπελος εὐφρόνη εὐώνυμος εὐωχέω s.v. ἐύς; ἐφέται ἔφηλις ἔφηλος s.v. ἔπι; ἐχεπευκής ἐχέτλη s.v. ἔχω; ἐχθοδοπέω s.v. ἔχθος; 1. ἕως (εϝ).

II. (no proth.) $\dot{\epsilon}$ - (Skt. a-), $\ddot{\epsilon}$ (*sue), 1. $\dot{\epsilon}$ ανός (F-), 1. $\ddot{\epsilon}$ αρ (Hitt. ešhar), 2. $\ddot{\epsilon}$ αρ (F-), $\ddot{\epsilon}$ βδομος (s-), $\dot{\epsilon}$ βρατάγησεν (augm.), $\ddot{\epsilon}$ γχελυς (Lat. anguilla, Lith. ungurỹs), $\dot{\epsilon}$ γώ, $\ddot{\epsilon}$ δος (s-), $\ddot{\epsilon}$ δω, $\ddot{\epsilon}$ θος (su-), $\ddot{\epsilon}$ θρις (F-; $\dot{\alpha}$ -, $\dot{\epsilon}$ - see Frisk and p. 71), $\dot{\epsilon}$ ίκω (F-), $\dot{\epsilon}$ ίλαρ (F-), $\dot{\epsilon}$ ιμι, $\dot{\epsilon}$ ινατέρες ($\dot{\epsilon}$ -), $\dot{\epsilon}$ ίπον, $\dot{\epsilon}$ Γρος (F-), 1. $\dot{\epsilon}$ Γρω (s-), 2. $\dot{\epsilon}$ Γρω (F-), $\dot{\epsilon}$ Γς (s-), 1. $\dot{\epsilon}$ Γσομαι (F-), $\dot{\epsilon}$ Γωθα (se-su-), $\dot{\epsilon}$ κεῖ (see p. 24), $\dot{\epsilon}$ κυρός (su-), $\dot{\epsilon}$ κών (F-), $\dot{\epsilon}$ ξ, $\ddot{\epsilon}$ ξ (su-), $\ddot{\epsilon}$ οικα (F-), $\ddot{\epsilon}$ ρος

- (su-), ἐόργη (Fε-F-), ἔπι, ἕπομαι (s-), ἔπος (F-), ἑπτά (s-), ἔπω, ἕπω (s-), ἔσκον, ἕσμα (s-?), ἕσπερος (F-), ἑταῖρος (s-?), ἔταλον (F-), ἔτερος (s-), ἔτης (su-), ἔτι, 1. ἐτός (F-) 2. ἔτος (F-), εὕδω (s-), εὕχομαι (see p. 90), εὕω (*eus-), ἐχῖνος, ἔχις, ἐχυρός (s-), 1. ἔχω (s-), 2. ἔχω (F-), ἕψω (s-?), 2. ἔως (i-).
- III. (non-IE) ἔβενος, ἐγγαρεύω (ἄγγαρος, Persian), Εἰλείθυια, ἐσσήν, ἔτελις, εὕμᾶρις.
- IV. (no etym.) ἔ (interj.), ἔα (interj.), 2. ἑανός, hεαρα, ἔβρος, ἐγγαροῦντες, ἔγγαραυλις, ἔγκατα, ἐγκρίς, ἐδανός, ἔδαφος, εῖα, εἰαμενή, εἴβω, εἴέν, εἴθαρ, εἰλαπίνη, εἰλιτενής, εἰρεσιώνη, εἰρήνη, εἴρων, ἐξαπίνης, ἑορτή, ἐπαινή, ἐπενπέτω, ἔπερθα, ἔπερος, ἐπέτοσσε, ἐπητής, 2. ἐπίξενος, ἐπίσιον, 1.2. ἐπίσκυρος, ἔπισσαι, ἔποψ, ἐσχάρα, ἔσχαρος, ἔτνος, ἑτοῖμος, εὐάζω (interj.), εὐθύς, εὐνή, εὖνις, εὐράξ, Εὖρος, Εὐρώπη, εὖτε, ἑψία.
- V. (unreliable) ἐάφθη, ἔδεθλον, ἐθμή, ὲθμοί, ἔθνος, ἔθων, εἰ (αἰ), εἴλιγγος (εἰλέω), εἰλικρινής, εἰλίπους (εἰλέω), Εἴλωτες, εἰμάδες, Εἰραφιώτης, *εἴρω (ἐρῶ), εἰρήν, ἑκάς (ἕ), ἐπασσύτεροι, ἐσθλός, ἑστία (see εϝ), ἔστωρ, ἐτάζω, εὐλή (εἰλέω), εὐρώς, ἐφιάλτης, ἔχθος.
- VI. $\dot{\epsilon}\dot{\alpha}\omega$. In the disyllabic root $C\epsilon_F\alpha$ assumed by Frisk the consonant (C) may also be absent or be a laryngeal, *(\hbar_1)e $\mu\hbar_2$ -, which is more probable than s- on account of the absence of aspiration.

ἐγείρω, Skt. gr-. Cf. ἐγρήγορα, pp. 117, 121.

ἔγχος beside OCS pro-noziti 'to pierce' etc. could be * (\hbar_1) engh-: (\hbar_1) negh-. Hypothetical.

ἔθειραι 'horses' manes'. The connection with ἔθρις τομίας or ὄθη φροντίς, ὅρα, φόβος, λόγος (!) Hsch. is extremely meaningless. Interpretation * $\hbar_1 dher$ -, * $\hbar_1 g^u her$ - is possible.

έθείρω, Φ 347 only, exact meaning unknown. The structure is the same as that of the previous word.

- èθέλω. It is highly improbable that è- is an apophonic variant of the prefix ò- (Schwyzer-Debrunner, p. 491:13), since it would be the sole instance of it. If cognate with OCS želěti * $\hbar_1 g^{\mu}hel$ is conceivable. (θέλω is secondary, lit. in Frisk).
- εἰκῆ. Wackernagel's interpretation (Sprachl. Unters. zu Hom., p. 137 A 1) as *ἐ-ϝεκῆ cognate with ἑκών, ἕνεκα leaves the ἐ- unexplained (of which these words show no trace). The interpretation must therefore be abandoned.
- $\&\kappa\alpha\tau\acute{o}\nu$. The origin of &- is unknown. The aspiration cannot be explained by analogy, so that we are probably not concerned here with a single vowel. Cf. p. 62.
- $\mathring{\epsilon}$ ύς. If $\mathring{\epsilon}$ υ- is compared with Skt. su-, a basic form * \hbar_1 su- is obvious. Hitt. aššuš can in that case have a from \hbar_1 . On the other hand the archaic ὑγιής has no $\mathring{\epsilon}$ -; however, for this compare p. 242. In any case the details are unclear and allowance must be made for crossing of forms. See Add.

ἐχθές is not on a par with the cases of prothetic vowel; cf. p. 24 and Schwyzer, p. 613.

Conclusion. — 'E- as prothetic vowel, otherwise than before $\rho \lambda \mu \nu F$, has been

demonstrated only in the case of ἐγείρω. Ἐχθές is capable of different interpretation, as is ἑκατόν. The other cases are very uncertain or have no prothetic vowel.

0.0-

Ι. (elsewhere) 1. ὄγκος s.v. ἀγκ-; 2. ὄγκος s.v. ἐνεγκεῖν; ὄγμος s.v. ἄγω; ὀδύρομαι s.v. ὀδύνη; οἴγνυμι (οϝ); Οἰδίπους s.v. οἰδέω; οἴομαι (οϝ); οἶος s.v. 1. ὅς; οἰσοφάγος s.v. οἴσω; οἰσπώτη s.v. ὄἴς; οἶστρος s.v. οῖμα; οἰσύπη s.v. ὄἴς; ὀκωχή s.v. ἔχω; ὄξος ὀξυρεγμία s.v. ὀξύς; ὁπλότερος s.v. ὅπλον; ὅσσα s.v. 1. *ὄψ; ὅσσομαι s.v. ὄσσε; ὅσσος ὅτε s.v. 1. ὅς; ὀτραλέως (ὀτρηρός) s.v. ὀτρύνω (?); οὔλιος s.v. 3. οὖλος; 1. οὖλος s.v. ὅλος; 3. οὖλος s.v. ὄλλυμι; οὐρία s.v. οὐρέω (?); 2. οὖρος s.v. ὁράω (?); οὐτιδανός s.v. οὐ; οὖτος s.v. ὁ; ὄφρα s.v. 1. ὅς; ὀχεύω s.v. 1. ἔχω (?); ὄχος s.v. 2. ἔχω.

II. (no proth. vowel) 1.2. ὀ- (prefixes), ὁ (s-), ὅβδην (ὀπ-), ὄγδοος, ὀγκάομαι, 1. ὁδός (s-), 1. ὄζος (pref. ὀ- ?), οἴαξ (*ois-), οἴδα ($_{\rm F}$ -), οἴδέω (*oid-), οἶέτεας (pref. ὀ-), οἴκος ($_{\rm F}$ -), οἴμα (*ois-), οἴνη (*oin-), οἴος (*oi $_{\rm V}$ -), οἴσος ($_{\rm F}$ -), οἴχομαι (*oigh-), ὄκρις (ἄκρος), ὀκρυόεις (false word division), ὀκτώ, ὀξίνα (*ok-), ὀξύς (*ok-/ak-?), ὅπατρος (ὀ- copul.), ὀπή (ὀπ-), ὅπισθεν (*opi), ὅπλον (ἕπω), 1. ὅς ($_{\rm F}$ -), ὄσσε (*ok $_{\rm F}$ -), ὀτρύνω (pref. ὀ-?), οὖθαρ, οὐλαμός ($_{\rm F}$ -), οὐλη ($_{\rm F}$ -), 2. οὖλος ($_{\rm F}$ -), 4. οὖλος ($_{\rm F}$ -), οὕνεκα, οὐρά, οὐρέω ($_{\rm F}$ -), οὖς, οὐσία, ὀφθαλμός, ὀφνίς ($_{\rm F}$ -), ὄχα, ὄχλος ($_{\rm F}$ -), 1. *ὄψ ($_{\rm F}$ -), ὀψέ, ὀψείοντες (ὀπ-).

III. (non-IE) ὄβρυζα, ὄγχνη (ὄχνη), ὀδόλυνθοι, ὀθόννα, ὄθρυς, οἶνος, ὄστλιγξ (p. 51 and 72), ὄστρακον, ὄστρειον (for this and foreg. see p. 51 s.v. ἀστράγαλος), ὀστρύα, οὐδών.

IV. (no etym.) δά (interj.), ὄβρια, ὄγκιον, Ὀδυσσεύς, ὀθνεῖος, ὄθομαι, ὀϊζύς (interj.), οἶκτος (interj.), οἰμώζω, ὀϊστός, οἴσω, οἶτος, οἰωνός, 1.2. ὄκνος, ὀξερία, ὀπέας, ὁπλή, ὀπτάω, ὅσιος, ὄσπριον, ὅστριμον, ὅτοβος (interj.), οὕδας, οὐδός, οὐλαί, οὖλον, οὖνο, οὖνον, οὐροί, 2. οὖρον, 1. οὖρος, οὐτάω, ὅχθη, ὄχθοιβος.

V. (unreliable) ὅα, ὀδύσ(σ)ασθαι, 2. οἴη, οἴμη, οἴμος, οἰρῶν (Skt. sfra-), ὀκλάζω (pref. ὀ-), ὀξύα, ὀπάζω, ὀπάων, ὀπηδός, ὀπίς, ὀπός (s-?), ὀπώρα (*op(i)-?), ὀσφραίνομαι, ὀσφῦς, οὐ, οὐρανός, ὄφις, ὀχθεῖν (ἔχθος), ὄψον (pref. ὀ-).

VI. ὅαρ does not have a certain etymology; ở- may be a prefix, cf. ἄκοιτις. ὀβελός ὀδελός seems to point to $-g^uel$ -; foreign origin is probable, see p. 193 f. ὄβριμος stands beside βριμός and ὄμβριμος, which does suggest non-IE origin.

ỏ δ ά ξ . Bechtel, Lex. pp. 241 ff., demonstrates that the original meaning is 'grasping, scratching' and that it was not connected with ὀδών until later. This same meaning may be found in ὀδάξω ἀδάξω ἀδαχάω etc. That would give a stem ὀδαχ-/ἀδαχ-. There is no convincing IE etymology. The interchange ἀ-/ὀ- is reminiscent of non-IE origin. See Add.

 $\delta \delta \dot{\nu} \nu \eta$, Aeol. $\dot{\epsilon} \delta \dot{\nu} \nu \alpha \varsigma$. If Frisk's derivation of Arm. *erkn*, gen. *erkan*, from **ed-uē|ōn* is correct, the Greek word will be a derivation of the apophonic form **ed-un-*; cf. also Skt. *-ad-van-* 'eating'. 'Οδύνη must in that case be based on assimila-

tion; various cases are known of $\varepsilon - \upsilon > o - \upsilon$ (Schwyzer, p. 255). PIE * $od - u\bar{e}/\bar{o}n$ is not plausible. We thus have here PIE full grade (in view of the Indian form; the Armenian may also go back to du-).

ỏδών, Arm. atamn as against Skt. dán etc. points to prothetic vowel. If Aeolian ἔδοντες is the original form, the connection with ἔδω becomes easy: if this had laryngeal (* $\hbar_1 ed$ -), the word for 'tooth' originally had the form * $\hbar_1 d\acute{o}n(t)$ (* $\hbar_1 d\acute{e}ntm$ * $\hbar_1 dn t ds$); $\delta \delta \omega v$ is then based on assimilation. Hittite has no h: e-it-mi. It has been supposed (Hendriksen, *Unters.*, pp. 51 and 72 ff.) that the h has disappeared here on analogy with the plural form, in which the laryngeal was vocalized in the zero grade: a-tu-e-ni, az-za-aš-te-ni [atsteni], a-da-an-zi. This interchange e/a is, however, also found in words where it cannot be of that origin (še-eš-zi ša-ša-an-zi 'to sleep', ú-e-eš-tin (2 pl. imp.) wa-aš-ša-an-zi 'to dress'). Hendriksen ascribes the latter to a kind of vocalic harmony, which does not convince me, as long as it is not also demonstrable elsewhere in Hittite. When he finally concludes from the fact that this vocalic harmony is absent in a-tu-en-i, az-za-aš-te-ni that the a here must therefore go back to vocalized laryngeal, he forgets that the same forms (1 pl. -ueni, 2 pl. -teni) occur with each verb (so that vocalic harmony is also improbable there) and that here too allowance may be made for the effect of analogy (ad- in 1 and 2 pl. from 3 pl.). In addition, the a may go back to PIE e. One cannot therefore say that Hittite points to laryngeal, although the possibility of a laryngeal is not entirely excluded by the Hittite data either.

However, it is also conceivable that the word for 'tooth' originally had \hbar_3 — and therefore is not cognate with $\eth\delta\omega$ — and that the Aeolian form is based on secondary transformation under the influence of $\eth\delta\omega$. This interpretation is perhaps suggested by $\nu\omega\delta\delta\varsigma$, p. 110, and $\alpha\iota\mu\omega\delta\delta\omega$, from which it emerges that $\eth\delta$ - was the basic element; for the connection with $\eth\delta\omega$ the participle form is essential. Finally, the parallelism with the forms in the previous lemma is striking. It is conceivable that the one group has influenced the other.

o $\mathring{\iota}$ φ ω as against Skt. yábhati is easy to understand as *(\hbar_3)eibh-; compare the suggested solutions in Frisk. For * \hbar_3 jebh- in Greek see p. 97. If the o-vocalism goes back to a root present *oibhmi, there is no reason to assume a laryngeal; cf. p. 131.

 $οπīπεύω see p. 129 (PIE *opi-<math>\hbar_3k^u$ -).

òπυίω is uncertain; neither cognate with Skt. púsyati 'to cause to thrive', nor with Lat. puer puber. The closest connection is with Etr. pui(a) 'woman' (Brandenstein, REIE 1.308). In that case the ò- will also have originated from the substratum language; there is no reason to assume Greek prefixing of a substratum word.

ὄπωπα see p. 122.

ὄτλος (A.) is interpreted as (pref.) $\delta + tl\hbar_2$ - 'to suffer, tolerate'. It must then be assumed that the laryngeal has disappeared (*o-tlħ2-os would have given * δ ταλος); for this disappearance see p. 242. The etymology is, however, too unreliable, like that of "Ατλας.

3. $\circ \varphi \in \lambda \lambda \omega$ (Hippon.), Arm. avelum 'sweep' may be * \hbar_3bhel -. This form is also possible for 2. $\circ \varphi \in \lambda \lambda \omega$ 'to increase' beside Arm. y-avelum 'to grow' and $\circ \varphi \in \lambda \circ \varphi$, for which a PIE stem form *obhel- would be very unusual (cf. Schwyzer, p. 512). The connection with Skt. phála-, phalati is very uncertain on account of the ph. The same interpretation also remains possible for $\circ \varphi \in \iota \lambda \omega$. The F- of Foglankou (Arc.) is probably not etymological (Fraenkel, Philologus 97 (1948) 62), which also emerges from Myc. operosi. The explanation by Szemerényi, Syncope, p. 201 f., from op-+hel-($\iota \circ \lambda$ -) is not convincing. Lat. debeo < *de-habeo is not appropriate as a semantic parallel; de- seems to be essential in this.

όφρῦς, Skt. bhrū- etc. presupposes *ħ₃bhru-ħ-; cf. p. 171.

Conclusion. — Prothetic vowel is probable for δδών ὀφέλλω $(2\times)$ ὀφείλω and ὀφρῦς. Τόλος is very uncertain. Τόβελος ὄβριμος ὀδάξ and ὀπυίω are probably non-IE.

There still remain the words in which prothetic vowel before F may be suspected. Such words have been pointed out above. They will be discussed here in the order α_{F} , α_{F} ,

p. af-

 $\dot{\alpha}\lambda\dot{\eta}\varsigma$ $\dot{\alpha}\lambda\dot{\eta}\varsigma$ (Ion.), Aeol. ἀολλ $\dot{\eta}\varsigma$ is interpreted as $\dot{\alpha}$ -($\dot{\alpha}$ -)-copulative $+ F\alpha\lambda$ -v-/Foλ-v- with the zero grade of Fελ- in εἴλω, cf. (ἄλις) γάλι· ἱκανόν Hsch. (i.e. Fαλ-). However, in that case one could expect $\dot{\sigma}$ - instead of $\dot{\sigma}$ - in the Aeolian form. Perhaps Dor. ἀ(F)λανέως also belongs here. The full grade in ἀελλ $\dot{\eta}\varsigma$ Γ 13? The formation is unclear; one would expect * $\dot{\sigma}$ -Fελ- $\dot{\eta}\varsigma$; see Frisk.

ἄγνυμι. After preverbs in $-\alpha$ ($-\alpha$ - $F\alpha$ -) $> -\bar{\alpha}$ -, which was spread from there. For ἐάγη see Chantraine, Gr. Hom., p. 18.

ἄεθλος, Arc. $\langle \mathring{\alpha} \rangle_{\text{Fεθλα}}$ (IG 5:2,75). The connection with Goth. wadi, OIcel ved 'pledge', Lat. vas, basic meaning 'to tie, bind; connection', remains semantically difficult (but cf. Dutch wedstrijd 'contest', in which the idea of 'pledge' is entirely lost). A difficulty is also offered by the vocalism, Lat. vas, Germ. *wadja-. Hitt. huitiazi 'to draw (the bow)' (Hammerich, Lar. b. Son., p. 6) does not belong here, since the basic meaning is 'to draw'. In itself *hauedh- is highly feasible. See Add.

ἀείδω. For αὐδή: Skt. vádati 'to speak' the analysis $*\hbar_2 eud$ -: $*\hbar_2 \mu ed$ - is an obvious one; see p. 89. However, ἀείδω cannot be derived from this. Wackernagel's $*\alpha$ -Fε-Fδ-εῖν $> *\alpha$ (F)ειδεῖν is rightly rejected by Frisk on the strength of ἀλαλκεῖν, i.e. if the ἀ- forms part of the stem (and therefore is not a prothetic vowel in the strict sense, as Wackernagel's explanation presupposes), $*\hbar_2 \mu e$ - $\hbar_2 ud$ - can only give $*\alpha$ Fαυδεῖν ($*\alpha$ Fαιδεῖν). Origin from the aorist is not obvious for 'to sing' either (one would also expect a differentiated form for the present) and there is no trace of this aorist: one finds φ 441 ἄεισε. Consequently ἀείδω must be interpreted as $*\hbar_2 \mu - ei$ -d-(beside $*\hbar_2 \mu - ed$ - $/\hbar_2 eu$ -d-). Åοιδός also points to this; there is no reason why this

should not be an old ablaut. Winter's explanation, Lg.~26~(1950)~365-70, of àxí $\delta\omega$ as secondary ablaut, based on a perfect * $\dot{\alpha}$ oi $\delta\omega < *Aw-Aowd-$ (!), does not deserve serious consideration.

ἀείρω. It is not necessary to assume two words of different origin. See Frisk's hesitation with reference to κατήορος κατωρίς and ἀορτή. The basic meaning is more or less 'to hang up, tie to'. The derivation of ἀείρω from ἀήρ is very unsatisfactory. For ἀείρω the interpretation * $\hbar_2\mu er$ - imposes itself. For the connection with Alb. vjer 'to hang up' and Lith. sveriù sveřti 'to weigh' see p. 85.

ἀέλιοι· οἱ ἀδελφὰς γυναῖκας ἐσχηκότες Hsch. OIcel. svilar (pl.) 'idem' gives a stem *suel-. Perhaps εἰλίονες is also derived from this with metrical lengthening (cf. εἰνατέρες). Derivation from *sue is meaningless. The paraphrases σύγγαμβροι ὁμόγαμβροι συγκηδεσταί are perhaps an argument for α-copulative. And yet *ħ₁uel->*ἐ(F)ελ-/ἀ(F)ελ- deserves consideration.

ἀέξω beside Goth. wahsjan, Skt. vakṣáyati etc. contrasts with Goth. aukan, Lat. augeo etc. as $*\hbar_2 \mu eg(s-)$: $\hbar_2 eug-(s-)$ with zero grade $*\hbar_2 ug-(s-)$ in Skt. $\iota ukṣant-$, $\iota ugr aug-$ etc. Cf. p. 89.

ἀηδών 'nightingale' perhaps as lengthened grade * $\hbar_2 u \bar{e} d$ - of * $\hbar_2 u e d$ - beside * $\hbar_2 u - e i - d$ -; supra s.v. ἀείδω.

ἀήρ (αὔηρ, ἀβήρ) as against αὔρα may go back to * $e\hbar_2$ -u- $\bar{e}r$: \hbar_2 -eu-r-. For the first structure cf. * $e\hbar_1$ -t- $m\acute{o}(n)$ * \hbar_1 -t-men-os, Skt. $\bar{a}tm\acute{a}$ $tm\acute{a}na\dot{h}$. For αὔρα * $e\hbar_2$ -u-r- is also possible. These constructions are no more than phonetic possibilities.

αἰετός on account of αἰβετός ἀετός. Περγαῖοι Hsch. from *αιϝετος. This stands for *αϝι-ετο- and is cognate with Lat. avis etc. This is also suggested by W. hwyad 'duck', which may go back to *auietos. Lat. avis, Arm. hav as against Skt. viḥ, Av. vīš, Skt. váyas- 'poultry' point to laryngeal. Lat. avis etc. must, however, be *ħ₂eui-. This points to a (proterodynamic) inflexion *ħ₂éui-s *ħ₂uéi-s (Kuiper, Notes, pp. 61 f.). There is thus no reason to call the α- in αἰετός prothetic, especially having regard to the Celtic forms, which must go back to full grade.

αἰσθάνομαι has been connected as ἀρισ- with audio < *au(i)s-d- (not from

*aus-d- on account of oboedio, which in that case is more likely to have been *obūdio, WH). Although d_{F} 105- suggests * $\hbar_2 \mu is$ -, Latin would require * $\hbar_2 e \mu$ -is-. Skt. ávati 'is pleased, promotes, protects, refreshes' (Szemerényi, Syncope, p. 217) does not belong here.

ἄστυ < *Fαστυ, Skt. $v\bar{a}stu$, is usually connected with ἄεσα, $v\dot{a}sati$ etc., to which there are objections on account of the absence of a prothetic vowel. The α of the stem in Greek is also striking.

2. ἄωρος 'sleep' (Sappho 57) beside ὧρος (Call., Hsch., EM). Is ὧρος based on contraction? Formally a connection with ἀωτέω is difficult, and in any case the meaning of this word is not certain.

ὧλκα see p. 40 s.v. ἄλοξ and App. 2.

Conclusion. — Ἄγνυμι ἄήρ αἰετός ἄλής and ἄστυ do not have prothetic vowel. Prothetic vowel is probable in ἄεθλος ἀηδών ἀείδω ἀείρω ἀέξω ἄεσα ἄημι; it is conceivable in αἰσθάνομαι, and perhaps also in ἀέλιοι. Ἄωρος ἀωτέω and ὧλκα are unclear.

q. of-

Two forms may have a prothetic vowel o- before F.

οἴγνυμι, Aeol. ὀείγην and Hom. ἀΐγνυντο suggest a stem ὀϝειγ-. However, it is not permitted to replace ἀναοίγεσκον in Ω 455 by *ἀνογειγ-. The structure of this stem makes prothetic vowel probable, which the connection with Skt. vejate vijate 'to retreat' would confirm. * H_3 μ eig- is therefore possible.

οἴομαι on account of ἀνώϊστος (Φ 39) may be from ὀϝισ-, which may go back to * $\hbar_3 \mu is$ -. (Szemerényi, Syncope, pp. 217 f., connects it with Skt. $\bar{a}vi\hbar$ etc. 'clearly' as * $\bar{o}\mu is$, which is mostly associated with αἰσθάνομαι. If $\bar{a}vi\hbar$ is connected with OCS ěviti 'δεικνύναι', the basic form was $\bar{e}\mu$ -.)

r. εF-

ἕδνα perhaps belongs with OE weotuma (< *ued-mon-); Russ. věno 'purchase price for the bride' may also be connected with ὧνος, Lesb. ὄννα, Skt. vasná- 'purchase price'.

Only Homer has a form with prothetic vowel; the word does not occur very often elsewhere (A., E., Pi.; Call., Theocr.), doubtless because the institution disappeared. Homer has seven forms with and seven without 'prothetic vowel':

έδνα	Π 190 Χ 472 λ 282	έπεὶ πόρε μυρία ἕδνα
	Π 178 τ 529	πορών ἀπερείσια ἕδνα
	λ 117 ν 378	μνώμενοι ἀντιθεὴν ἄλοχον καὶ ἕδνα διδόντες
ἔεδνα	α 277 β 196	οί δὲ γάμον τεύξουσι καὶ ἀρτυνέουσιν ἔεδνα
	π 391 φ 161	μνάσθω, ἐέδνοισιν διζήμενος
	ζ 159	ὅς κε σ᾽ ἐέδνοισι βρίσας
	9 318	ἀποδώσει ἔεδνα
	o 18	έξώφελλεν ἔεδνα

It is difficult to draw a conclusion from this. The *Iliad* only has the formula πόρε/πορὼν ...-α ἔδνα. The*Odyssey*has ἔεδνα, apart from καὶ ἕδνα (λ <math>117 = ν 378, where it is striking that λ 282 also has the *Iliad* formula with ἕδνα; this suggests -α ἔδνα II. <math>> λ 282 > λ 117 = ν378). This leads to the idea that -α ἔδνα stands for -' ἔεδνα (μυρί', ἀπερείσι'). That ἔεδνα is the original form is confirmed by ἐεδνόομαι (β 53) and ἐεδνωτής (N 382). If this analysis is correct it would seem that ἕδνα is an artificial form. (A. Pr. 559 ἔδνοις — which incidentally is based on a conjecture — may, if it goes back to ζ 159 (Groeneboom *ad loc.*), be based on an incorrect split (σε ἔδνοισι).) If this is so and ἕδνα is not based on a reality in the spoken language, the aspiration must also be artificial and must perhaps be attributed to the Alexandrine scholars, cf. Chantraine, Gr. Hom., p. 188. (For the principle of false word division in general see e.g. Leumann, Hom. W., pp. 48 ff.).

A special problem is presented by ἀνάεδνος (I 146 = 288 (122-57 = 264-99) N 366). With ἀνα- instead of ἀ(ν)- (Schwyzer, p. 432); 'not with many ἕδνα' with α-copulative, cf. ἄεδνον· ἄφερνον ἢ πολύφερνον Hsch. (idem, ibid.); -αεδνος with prothetic vowel α instead of ε or incorrect transmission of *ἀνέεδνος (Chantraine, Gr. Hom., p. 182)? Did the form come into being through a false word division in ἀπερείσια ἕδνα and μυρία ἕδνα? One is incidentally reminded of ἐέρση, ἕρση, (Cret.) ἀέρση; see below s.v. ἐέρση.

εἴδομαι. The participle ἐεισάμενος is said to have a prothetic vowel in opposition to εἰσάμενος, Chantraine, Gr. Hom., p. 182. There is no trace of prothetic vowel in any of the cognate forms (in Homer εἴδεται $6\times$, -όμενος -η $13\times$, εἴσαιτο, διαείσεται, εἴδος passim, εἴδωλον $13\times$; the ἐ- of ἐείσω and ἐείσατο, $16\times$, is an augment).

There are eight cases of εἰσάμενος, nine of ἐεισάμενος. In λ 241 there is a varia lectio τῷ δ' ἄρα εἰσάμενος, so that this place will be left out of consideration for the time being (8:8 remains). If we examine these cases, ἐεισάμενος proves to occur only in a fixed pattern: τῷ μιν ἐεισάμενος προσέφη + epithet + name of a god (or supernatural being, θεῖος "Ονειρος B 22). Variants are τῆ, ἐεισαμένη and προσεφώνεε (this B 22 Γ 389). On three occasions the verse ends with Διὸς υίὸς Ἀπόλλων (Π 720 P 326 Y 82), and once with ἑκάεργος Ἀπόλλων (P 585; missing from many manuscripts). Further one finds B 795 πόδας ἀκέα Ἦρις, Γ 389 δῖ Ἀφροδίτη and ζ 24 γλαυκῶπις Ἀθήνη.²¹ This situation strongly suggests that this formula has developed through a false word division. Bekker, Hom. Blätter I, p. 156, already suspected that the form is recent. According to Solmsen, Unters., p. 250, it served to avoid a στίχος λαγαρός, which in itself is not an adequate explanation. The cases of εἰσάμενος elsewhere in Homer cannot have been the example here (if only because this one formula is concerned here): three times at the beginning of the verse (N 45.216 P 555), three times |ἀνέρι (F)εισάμενος (Π 716 P 73 Φ 213), Στέντορι (F)εισάμενος

²¹ If one studies these cases the formula προσέφη Διὸς υἰὸς ἀΑπόλλων seems the oldest. Προσεφώνεε is a metrical variant (B 22 Γ 389).

(Ε 785), ἵππφ (γ)εισάμενος (Υ 224). (Noteworthy is (γ)εισ- Π 716: ἐεισ- Π 720; cf. Υ 82: 224.)

If we want to reconstruct the original form we are therefore looking for τῷ C´ε Fεισάμενος, i.e. a group of sounds that begins with a consonant, whose first syllable is short and whose second (perhaps independent) syllable ends in a. The closest equivalent of μιν is '(F)ε, and one could therefore assume τῷ C '(F)ε Fεισάμενος. Compare for the use of 'to speak to (πρός)': ι 258 άλλὰ καὶ ὅς μιν ἔπεσσιν ἀμειβόμενος προσέειπεν and ε 96 καὶ τότε δή μιν ἔπεσσιν, etc., where, to restore the F of Fέπος, ε Fέπεσσιν is presumed, Chantraine, Gr. Hom., p. 119 (although it is not automatically evident that an older form is the basis here). As 'FE arose from *sue, one would expect that it would make position. This is, however, only so in some forty of the over 800 (?) cases (op. cit., pp. 146 ff.). It is tempting to posit τῷ μέν 'FE FΕΙΘάμενος, but it is not probable that 'FE would not have lengthened preceding μέν. The possibility of δέ then remains. One can imagine the following development: τῷ δέ $^{\circ}$ (F)ε Fεισ->τῷ δὲ ἐεισ->(? τῷ μὲν ἐεισ->) τῷ μιν ἐεισ-. Compare for the transition from the second to the third phase μέν of for older δέ τοι (? op. cit., p. 147). For replacement of δέ by μέν see further Hoekstra, Modifications, pp. 35 and 56 ff. $\Delta \dot{\epsilon}$ is normal in these locutions, cf. for instance Π 706.744 P 18 and formulas like όχθήσας δ' ἄρα εἶπε πρὸς ὃν μεγαλήτορα θυμόν and τὸν δ' ἀπαμειβόμενος προσέφη.

As regards λ 241, it is tempting to assume τῷ δ' ἄρα ϝεισ-, because the verse does not have the exact formula τῷ μιν ἐεισ-, etc. And yet τῷ δ' ἄρ' ἐεισ- may be a first step towards a freer use of the doublet. For example, one finds in ζ 24 a varia lectio ἐειδομένη. B 795 αρ ειδομενη P^{40} will simply be an attempt at restoration. It is, however, possible that the present is original, ἐεισαμένη 'restored' on the example of the other places. Pi. N. 10.15 (and Arat. 395, A.R. 4.221, Q.S. 3.590) may be based on this. [Theocritus] 25.58 has a further extension, ἐείδεται.

It therefore seems probable that ἐεισάμενος is an artificial form from the language of the epic, which is of no value to comparative linguistics.

εἴκοσι is explained by *ἐϝῖκοσι, ἐείκοσι as the old form with graphic ει for ī under the influence of the contraction. Chantraine, *Gr. Hom*, p. 128, 182, 260, has a different point of view: εἴκοσι in Homer points to F, i.e. graphically for *ϝῖκοσι.

When the distribution in Homer is considered, there proves to be a preponderance of ἐείκοσι (27×, including ἐεικοσι-) over εἴκοσι (17×, including εἰκοσι-). The use of ἐείκοσι does not seem to be tied to a single rule. However, the occurrence of εἴκοσι is limited:

nine times after καὶ (B 510.748 Λ 25 N 260 β 212 = δ 669 ι 241 κ 208 π 249) four times ἤλυθον εἰκοστῷ ἔτεῖ ἐς πατρίδα γαῖαν (π 206 τ 484 φ 208 ω 322) twice at the beginning of the verse (β 355 ε 244) ε 34 ἤματι κ' εἰκοστῷ init. ι 209 ἀνὰ εἴκοσι.

It seems to me that a F is only weakly attested to here. At the beginning of the verse no F needs to be assumed. There is no reason to omit κ' in ε 34. In the formula ἥλυθον εἰκοστῷ F is impossible. Bekker read here ἦλθον ἐεικοστῷ. Hoekstra, Modifications, p. 52, suggests that it is a replacement of ἥλυθε Fεικοστῷ Fέτεϊ.

This seems more probable to me, for it is not clear why an original ήλθον ἐεικ-should not have been preserved. Here it is of importance that one can read ήλυθε ἐξεικ- instead of ήλυθε γεικ-.

The reconstruction gains in probability through the following consideration. To explain the length of the ι of ἔτει Hoekstra suggests πτολίπορθος 'Οδυσσεύς to complete the verse. This is of course highly feasible, but cannot be further demonstrated. It would be less drastic to replace es by \(\tilde{\eta}\)v; the F- group then causes the length of the preceding syllable (or fέτεει (*) fήν?); cf. Chantraine, Gr. Hom., p. 146. In the replacement of ήλυθε by ήλυθον the form ήν was regarded as a difficulty, and ec was substituted for it. It is true that in Homer there seem to be traces that originally őç could refer back to all three persons singular and plural, but firstly this is an archaism that probably no longer formed part of the living language at the time of the supposed replacement, and secondly at least a part of these cases may have come about through similar replacements to the ones here. (For instance, one can solve the difficulty for ι 28 by starting from an original οὔ τοι 'Οδυσσεὺς | ἧς γαίης δύνατο γλυκερώτερον ἄλλο ἰδέσθαι. Without much difficulty the whole passage here up to verse 32 can be put in the third person: 19 ην, 20 μέλει/μέλεν, τοῦ, 21 ναιέταεν; but this remains a remote possibility.) See Chantraine, Gr. Hom., p. 273. However, it is clear that Hoekstra's hypothesis of the replacement of the third person by a first and the reconstruction of \(\tilde{\eta}\) reinforce each other, the more so as the two problems that the verse presents in its later form can be ascribed to the one fact of this replacement. The reconstructed verse is remarkable: *ήλυθ' ἐϝῖκοστῷ ϝέτεϊ ἡτὴν πατρίδα γαΐαν, for it has various elements pointing to great age: (1) ἤλυθε, which in Homer seems older than ἦλθε; (2) ἐϝῖκ- (ἐεικ-); (3) the F of Fέτεϊ; (4) ℉ήν; (5) the formula πατρίδα γαΐαν; (6) the single accusative of direction. See Add.

In any case, this verse cannot be regarded as proof of Feik-. Beside ι 209, where F is possible, the places then remain where it follows on καί; according to Chantraine, loc. cit., p. 128, these point to F. In my opinion the large number of these cases is striking. It is seen that these nine places split up into two groups: καὶ εἶκοσ $-\frac{5}{2}$ 0 seven times as against $\frac{4}{2}$ 0 in $\frac{4}{2}$ 2 and $\frac{1}{2}$ 249 ($\frac{4}{2}$ 25 χρυσοῖο καὶ εἴκοσι κασσιτέροιο as against $\frac{4}{2}$ 34 ἐείκοσι κασσιτέροιο; there is no reason to omit τε in $\frac{1}{2}$ 249). In the last two cases F is impossible. In the other seven cases one may assume F. However, as these cases all occur at the same place in the verse, it is possible that they go back to an old 'formula', and that καὶ (F)εικ- is a modernized form of καὶ ἐ(F)εικ-. If this is correct in principle, then only F1 209 ἀνὰ εἴκοσι remains as support for the F2. Of course, this may be replaced by ἀν' ἐεικ-, but that is arbitrary; we shall be concerned here with a recent verse (perhaps a modernization of a (formular?) ἀν' ἐεικ-).

It seems to me justifiable to conclude that in Homer EFEIK- is the old form, and

είκ- the more recent (β 355 ε 244; ε 34; Λ 25 π 249; ? ι 209), which was introduced in a few old formulae (ήλυθ' ἐεικ-, καὶ ἐεικ-, ? ἀν' ἐεικ-).

It now therefore seems probable that all forms of the Eastern dialects go back to *έρῖκοσι (which is what Frisk argues against Chantraine). Boeot. ρίκατι, Thess. ἴκατι, Pamph. φίκατι are borrowed from West Greek dialects, which also emerges from -τι (not -σι). Against this we have Dor. etc. ρίκατι, which corresponds to Av. $v\bar{i}saiti$, Lat. $v\bar{i}ginti$. It thus remains uncertain whether these forms go back to * $\hbar_1 u\bar{i}k$ -; in West Greek the laryngeal would not have been vocalized in that case. If this is correct, the reconstruction * $du\bar{i}k$ - no longer applies; even if it is assumed that the d disappeared back in the proto-language, this cannot be combined with * $\hbar_1 u\bar{i}k$ -. Comparison with έ- of ἑκατόν is incorrect, since here the same form is found in Doric too.

εἰλέω. Everything in Homer points to F; cf. Cret. καταγελμένος and the widespread stem *μel-, WP i. 295 f. There is only one form with 'prothetic vowel' in Homer, Φ 295. One could read γέλσαι here instead of ἐέλσαι, but the whole passage is definitely late. Compare the strange use of Ἰλιόφιν in the same verse; cf. Leaf ad loc. It therefore does not seem impossible that the form has been created by analogy with (ἐ)έλδομαι (ἐ)έλπομαι (and perhaps also under the influence of the perfect ἔελμαι). Cf. Chantraine, Gr. Hom., p. 130 and 181 (but είλίσσω can stand for ἐλίσσω by analogy with εἰλέω: Frisk s.v. ἕλιξ). Nor does Att. εἴλλω seem adequate for assuming a prothetic vowel. The picture becomes even more complicated with εἰλύω. Here the perfect εἴλῦμαι < γε-γλῦ- may have played an important part. The impression is gained that the form εἰλ- has spread further from this. Cf. Frisk s.v. and Chantraine, Gr. Hom., pp. 131 f.

εῖλη ἕλη (Ar.) 'heat of the sun' is connected with *suel- in Lith. svilti (no disyllabic root, Fraenkel s.v.), OE swelan etc. The form *Fελα is found in Hsch. βέλα· ἥλιος, καὶ αὐγή, ὑπὸ Λακώνων. Εἴλη is explained by *ἐ-Fhελα. Must one assume * \hbar_1 μel-beside *sμel-? Cf. p. 85 f. One is inclined to connect ἀλέη (since ρ 23) with the preceding forms on account of its identical meaning. It is, however, difficult to derive ἀλέη from *sμel- (*sμel-?). The forms discussed here cannot be cognate with ἥλιος, which is based on *se \hbar_2 μel-, if only on account of the \hbar_2 .

εἴργω. It appears that Homer has forms of ἐργ- beside ἐεργ-. For Attic see below. Forms without prothetic vowel have been assured for Doric by Heracl. ἐφέρξοντι, συνhέρξοντι, where the aspiration is difficult to assess (Buck, *Gr. Diall.*, p. 54).

If we study the forms in Homer, we find that the present stem ἐεργ- occurs $19 \times$ (including compounds with ἀν-, ἀπ-, δι-, προ-, συν-, the lengthened stem ἐεργαθ- and finally ἐεργνυ-) as against ἐργ- $5 \times$. Of these, P 571 | ἥ τε καὶ ἐργομένη has a varia lectio ἥτε ἐεργομένη, while Heyne reads ἡ καὶ ἐεργομένη (as does Leaf). In Λ 437 χρόα ἔργαθεν Leaf reads χρο' ἐέργαθεν. In addition one finds ἀποέργει twice (Θ 325 γ 296), and ἀποέργαθε once (Φ 599), where one may suspect ἀπεεργ-. It therefore seems probable that the present stem was originally only ἐεργ-. The isolated form

(τῆλέ με) εἴργουσι Ψ 72 could go back to μ' ἐέργουσι (Bentley) and the strange ἐρχατόωντο (ξ 15; *infra*) is in my opinion of no value to this discussion. On the other hand the agrist has ἔρξαν ξ 411 and ἔρχθεντ' Φ 282 and the perfect ἔρχαται. The explanation of these forms is difficult.

ἔρχαται. The forms ἔρχαται (Π 481 κ 283), ἔρχατο (Ρ 354 ι 221 ξ 73), ἐέρχατο (κ 241) present many problems. Chantraine describes the forms as not old, in view of their e-vocalism. They belong (if from ἐέργω) to the small group of aspirated perfects (in 3 pl.) in Homer (Chantr., p. 434; Schwyzer, p. 771: τετράφαται, ὀρωρέχαται, ἐπώιχατο). None of the six places calls for F (for ξ 73 see Chantraine, Gr. Hom., p. 136). F is impossible in Π 481 and κ 241; the context does not recommend the replacement of γάρ by δέ in P 354. Ἐέρχατο is regarded as reduplication Fε-F-. But in this place (κ 241, the only time that it occurs), a F cannot be read. In addition, ἔρχαται is said to have been created by metanalysis of ἐέρχατο as augment form (this is, for instance, the view of Leumann, Hom. W., p. 179 f.). I do not believe that this is correct. The absence of F, and likewise the absence of prothetic vowel, does not point to this being cognate with ἐέργω (cf. the doubt in Chantraine, Gr. Hom., p. 136: "On a l'habitude de rattacher à ce verbe..."). A stem *sergh- may be suspected. Cf. also ἔρχατος. It could be connected with Lith. sérgmi and sérgiu sérgeti 'to guard' (this is the opinion of Fick, Vgl. Wb. 4 I 562), and ἐέργω on the other hand with Lith. veržiù 'einengen, schnüren, pressen', see WP i. 272 uergh-.

ἐεργμένος. The perfect participle ἐεργμένος occurs at two places only. Ε 89 τὸν δ' οὕτ' ἄρ τε γέφυραι ἐεργμέναι ἰσχανόωσι, where there is a varia lectio ἐερμέναι. The meaning is not entirely clear. F- (FεFεργ-) is impossible. The phonetic correspondence with M 38 is striking, νηυσὶν ἐπὶ γλαφυρῆσιν ἐελμένοι ἰσχανόωντο, where there is a varia lectio ἐεργμένοι.

ἔρξαν. There are two aorist forms, ἔρξαν ξ 411 and ἔρχθεντ' Φ 282 (in the same passage, 295, the suspect ἐέλσαι appears). For ἄρᾶ ϝέρξαν see p. 81.

εἴρερον is not definitely interpreted; from *FερFερον Frisk, with semantic parallels.

ἐέλδομαι has in Homer prothetic vowel seventeen times, as against three forms without: E 481 ψ 6 (τά τ' ἔλδε(τ)αι to be corrected into τὰ (F)έλδε(τ)αι?) and Ψ 122 ἐλδόμεναι at the beginning of the verse. In addition only ἐέλδωρ occurs in Homer (10×), and ἕλδωρ solely in Herodianus and Hesychius. One is therefore inclined to regard the forms without έ- as secondary; however, the cases mentioned cannot be

corrected (in Ψ 122 there is a varia lectio έλκόμεναι, to which, however, there are objections; v. Leaf). See the following.

ἐέλπομαι occurs beside ἕλπομαι in Homer, but elsewhere one finds only forms without prothetic vowel, and likewise ἔλπω (in Homer only β 91 = ν 380 (| πάντας μέν $\mathring{\rho}$ ' ἔλπει) and ἐλπίζω. Of ἐλπίς (Hom. only τ 84 = π 101 ἔτι γὰρ καὶ ἐλπίδος αἴσα) no by-form is known. Further Homer has ἐλπωρή (4×) and the proper name *Ελπήνωρ (Od.). The old perfect ἔολπα < *Fε-Fολπ- does not suggest prothetic vowel (one would expect Attic reduplication, *ἐξήγολπα). In ἀελπής (ε 408) and ἀελπτέω (H 310), too, there is no evidence of prothetic vowel. In the forms of (ἐ)έλπομαι the ratio is the opposite of that of (ἐ)έλδομαι: 46 to 8 with prothetic vowel (sc. Θ 196 K 105 M 407 N 8.609.813 P 488 ψ 345; N 8 τιν' ἐέλπετο not to be replaced by τινα ἔλπετο). Twice the formula θυμὸς ἐέλπεται occurs, M 407 N 813. Apart from ψ 345 (the only place in the *Odyssey*), 'Οδυσῆα ἐέλπετο (with hiatus), F- can be read everywhere for \(\delta\)- (which does not mean to say that this has to be done). For K 105 M 407 N 813 there is a varia lectio ἐελδ-. (That K 105 is recent is evidenced by the fact that the vvv preceding ἐέλπεται has a short vowel, which only occurs further in Homer in Ψ 485; Ruijgh, L'élém. ach., p. 64.) See Add.

When the last two groups are considered, one has the impression that ἐέλδομαι originally did have a prothetic vowel and ἕλπομαι did not. Both the semantic and the great formal correspondence caused the two verbs to influence one another. This explains the three forms with ἐλδ- (in the epic and Pi. O. 1.4, apart from ἔλδωρ in Herodianus and Hesychius) and the forms with $\& \epsilon \lambda \pi$ - (only in the epic).

ἐέρση has a wide variety of forms. Homer has only ἐέρση, but beside ἐερσήεις (Ω 429) also έρσήεις in Ξ 348 (λωτόν θ' έρσήεντα) and Ω 757 (νῦν δέ μοι έρσήεις). In 1 222 (χωρίς δ' αὖθ' ἔρσαι) F is not possible; this confirms that this word, perhaps 'young lambs', is not ἐέρση used figuratively (A. Ag. 141 δρόσοι may be based on incorrect interpretation of this place). It is clear that ἕρση indicates an age category here, just as there are many separate names for animals in their early years. One also finds ἐέρσα Sappho 73(a)9 LP., ⟨ἐ⟩έρσα ead. 96.12, ἔερσα Pi. N. 3.78. Then ἄερσαν· τὴν δρόσον. Κρῆτες Hsch. and ἀέρσην Posidipp. (P. Lit. Lond. 60); finally ἔρσα Alcm. 57 Page (ap. Plut., Διὸς θυγάτηρ "Ερσα), ἕρσα Theocr. 20.16, but ἐέρσα 2.107. The form έρσ- in έρσώδης (Thphr.), and further only in Hsch. έρσαῖα beside ἐρρήεντα (with Att. pp).

It may be wondered whether the rarely occurring ερση does not in part go back to an incorrect interpretation of t 222. If one starts from * $\hbar_1 yers$ -, beside Skt. varşám 'rain', the connection with οὐρέω becomes difficult, but cf. p. 76. The word was evidently replaced at an early date by δρόσος (since A., Pi., Hdt., still in New Greek).

έστία has nothing that suggests prothetic vowel.

εὔληρα Ψ 481 beside αὔληρα Epich. 178, ἀβληρά ἡνία Hsch. can hardly be explained by *ħulēr-, since in that case one would rather expect *ħulēr-, which would have given *όληρ-. The connection with εἰλέω is difficult, since this word has no prothetic vowel. The link with Arm. lar 'bond, rope' is doubtful for the same reason. It must be asked whether we are in fact concerned here with a prothetic vowel: in structure this case differs from most — if not all — other cases to the extent that it has prothetic vowel before two sonants instead of before one. The word could be of non-IE origin; cf. s.v. $\mathring{\alpha}\lambda o \xi$ p. 40.

εύρίσκω may be interpreted along with Frisk as reduplicated aorist.

εὐρύς beside Skt. $ur\dot{u}$ -, Av. vouru-, may be based on metathesis of *Fερυ-. A laryngeal gives the same difficulty as in εὔληρα (possibly * $\hbar_1 uru$ -> εὐρυ-). Add.

1. $\xi \omega \varsigma$, Ion. $\dot{\eta}\dot{\omega}\varsigma$, Dor. $\dot{\alpha}_F\dot{\omega}\varsigma$ from * $\bar{a}us\bar{o}s$, Lat. aurora, must be based on * $\bar{e}\hbar_2$ -u-s- $\bar{o}s$ (or * $\hbar_2\bar{e}us$ - $\bar{o}s$); it is not probable that the u is consonantal, * $e\hbar_2us\bar{o}s$. The zero grade * \hbar_2us - in Skt. $us\dot{a}s$. There can be no question of prothetic vowel.

Mention should also be made here of a form not found under & (Chantraine, Gr. Hom., p. 144 and 182 Add.):

ἴσος, Boeot. Fισγος, Hsch. γίσγον ἴσον. This has a form in Homer with apparent prothetic vowel; this is the opinion of Chantraine l.c., for instance. However, there are various indications that this is not a real but only an artificial form from the epic language. Outside Homer there is no indication of prothetic vowel (for Mycenaean see below). All derivations in Homer have ἴσο- (-θεος $14\times$, -μορος, -ομαι, -πεδον, -φαρίζω $4\times$, -φόρος). The ratio of prothetic vowel to none is $53\times$: $55\times$ (with in addition ἴσον $9\times$ and ἴσα $8\times$ as adverbs). This seems a practically equal distribution, but at closer sight the prothetic vowel proves to occur only in the feminine, at the end of the verse (with one exception) and in a number of fixed formulae. It occurs only with ναῦς $(19\times)$, ἀσπίς $(17\times)$, δαίς $(13\times)$, φρένας $(3\times)$ and in one separate case. One finds:

```
I. 5× νηὸς ἐίσης
```

- 2× νηες είσαι
- 11× νῆας ἐίσας
- $1 \times$ νηυσὶν ἐίσης (δ 578)
- II. 14× ἀσπίδα πάντοσ' ἐίσην (all Il.)
 - 1 × ἀσπίδι πάντοσ' ἐίση (Ν 405)
 - 2× ἀσπίδα... πάντοσ' ἐίσην (Μ 294 ~ Φ 581)
- III. 10× δαιτὸς ἐίσης²²
 - $1 \times \delta$ αιτὸς ἐίσης not at the end of the verse (I 225)
 - 1× δαιτός... είσης (9 98)
 - 1 × δαῖτας ἐίσας (λ 185)
- IV. $3 \times \varphi \rho \dot{\epsilon} v \alpha \varsigma \ddot{\epsilon} v \delta o v \dot{\epsilon} i \sigma \alpha \varsigma (\xi 178 \lambda 337 = \sigma 249)$
- V. 1× σταφύλη ἐπὶ νῶτον ἐίσας (Β 765)

In addition χ 128 has a varia lectio ἐντὸς (ἔνδον) ἐῖσαι (for εὖ ἀραρυῖαι).23

 $^{^{22}}$ δαίνυντ', οὐδέ τι θυμὸς ἐδεύετο δαιτὸς ἐίσης in A 468. 602 B 431 H 320 Ψ 56 π 479 τ 425; cf. οὐ γάρ μοί ποτε βωμὸς ἐδεύετο δαιτὸς ἐίσης Δ 48 Ω 69; further only O 95.

This version is generally ignored, although it may well be the oldest. True, it is not evident what the exact meaning is, but there are other obscurities in this technical passage. Eň ἀραρυῖαι seems a — rather flat — replacement for solving this difficulty, while it is not clear where the version ἐντὸς

In cases I, III, IV (V) the $\dot{\epsilon}$ - may be omitted, which, however, gives spondean verses. In II this is impossible, but here an original $\pi \dot{\alpha} \nu \tau \sigma \sigma \epsilon$ fight is self-evident (so others, e.g. Ebeling, Lex. s.v. $\dot{\epsilon} i \sigma \eta$); cf. A 163 $\sigma o i \pi \sigma \tau \epsilon$ (F) $i \sigma o \nu$ (not at the end of the verse). In this way it seems probable that $\dot{\epsilon} i \sigma \eta$ has come into being by metanalysis²⁴ of cases like $\pi \dot{\alpha} \nu \tau \sigma \sigma \epsilon$ fight, after which this form was used to avoid spondees in the fifth foot in existing formulae (I, III). This was followed by a somewhat freer use, which in this perhaps unique case can be followed step by step (separation, not used at the end of the verse, $\nu \eta \nu \sigma i \nu \dot{\epsilon} i \sigma \eta \varsigma \delta$ 578, of horses B 765), but at first always with the same words and at the same place in the verse. Only in this way is this strange form comprehensible, in my opinion. See Add.

Conclusion. — Prothetic vowel seems plausible in ἔεδνα ἐείκοσι/εἴκοσι ἐέργω/εἴργω ἐέλδομαι ἐέρση. Εἴλη εὔληρα εὐρύς are uncertain. For a general discussion of the prothetic vowel before F (and εF in particular) see the general conclusions, p. 76 ff.

s. Survey of the Material for the Prothetic Vowel

In general it is of course possible that words with prothetic vowels have not been included in the preceding lists because they have no reliable etymology; in addition words with 'prothetic vowel' may also have been preserved in compounds which have not been found in this way. On the other hand it is possible that prothetic vowel has been incorrectly assumed; in particular non-IE words may have been included which are irrelevant to our problem. And yet the majority of the material will have been collected here and it seems justified to base a conclusion on this.

Two words that were found elsewhere may be mentioned here.

*ἄπελος in ὀλιγηπελέων stands beside OIcel. afl, OE afol 'force' as * \hbar_2 pelbeside * \hbar_2 epl-.

ή μεκτεί· δυσφορεί Hsch., περιημεκτέω, may have a stem *άμεκ-τ- or *έμεκ-τ-

ἔῖσαι would have come from: lectio difficilior potior. Formally, the resemblance with πάντοσ είσην is striking; for ἕνδον cf. IV *supra* (where it may be remarked that this exactly agrees with the structure of II, unlike I and III). There is no indication of an original ἔνδοθε (ἔντοθε) ρῖσαι.

²⁴ Perhaps influence was exerted by the frequent ἐντὸς ἐεργ- (-ει, -ε(ν), -ον; B 617. 845 I 404 Σ 512 X 121 Ω 544 η 88); in addition ἐκτὸς ἔεργε μ 219. Cf. in particular ὕψοσ' ἔεργε Ξ 349. All these locutions are at the end of the verse. Cf. finally ἄψ ἐπὶ νῆας ἕεργε Π 395 (not at the end of the verse).

²⁵ Ruijgh, *Etudes*, p. 361, suggests reading *ewisu*- as *ήρισυ-, which he thinks developed by assimilation in *ήμισερος. He compares ρέδιμνος, which would have developed by *diss*imilation from μέδιμνος. However, the interchange u/m here points more towards a substratum word, cf. p. 129, n. 57. Consequently, Ruijgh's interpretation does not seem likely to me.

as basis. However, composition with α -privative may also be considered. Frisk, II 513, is of a different opinion.

A prothetic vowel is perhaps also found in Myc. ewepesesomena. The text, MY Oe 127, reads: pawea2 ewepesesomena WOOL 20. The first word, pharweha, φάρεα 'cloaks', is clear. The second word is derived by Palmer, BICS 2.44, from *ů (Cypr., = ἐπί) and ἕπω. However, there is now no longer an adequate foundation for this form *ů; see Risch, Kratylos 10 (1965) 92. Another explanation is that of εδ έψησόμενα 'to be well boiled' (Docs., p. 322). However, there are a number of objections to this. In the first place eu- is always spelt e-u-; for the assumed ewakoro instead of euwakoro see Ruijgh, Etudes, p. 360. (Whatever the etymology of eò- may be, the fact that it is often disyllabic in Homer makes it certain that it was so in Mycenaean too.) Further, the spelling -we- is in conflict with the aspiration of εψω: if this is old, then the h ought still to be present in Mycenaean, and one would expect the spelling *e-u-e-pe-. Finally, the interpretation of the tablet as a whole is rather strange. The translation (Docs.) 'woollen cloaks to be well boiled' seems incorrect to me. For one would expect the ideogram for 'cloak' (*159), not that for 'wool' (*145); one finds this (*159) for instance in KN L 870, with the adjective werweha 'woollen'. Moreover, it seems dubious that it would be noted on these tablets that they had to go to the laundry (an attempt at another interpretation in Docs.), while here eò- too appears rather naive. (True, φαρος ἐυπλυνὲς is found in ϑ 392.425 v 67 π 173, but these are not palace records.)

If the root is au- (* h_2eu -), as the manuals usually state, the supposition ceases to apply. However, this reconstruction is not very reliable; it seems to be based almost entirely on Arm. aud- 'shoe', z-aud 'ribbon' (WP, p. 16), a by no means evident connection.

The enlargement s has no parallel in the other languages for this root, but cf. ἀέξω $< *\hbar_2 \mu eg$ -s-, ἀλέξω $< *\hbar_2 lek$ -s- (with fut. ἀλεξησ-, Il.).

The — obvious — combination of the two words is found in Homer only in v 108 φάρε' ὑφαίνουσιν ἀλιπόρφυρα, θαῦμα ἰδέσθαι.

In my opinion this interpretation explains the use of the ideogram 'wool' with the word *pharweha* (in fact: 'wool to weave cloaks from').

A survey follows of the forms in which prothetic vowel was assumed.

	α	ε	o
ρ	Άρεπυια ἀρήγω ? Ἀρέθουσα ? ἀριθμός	ἔρεβος ἐρείκω ἐρείπω ἐρείπω ἐρεύγομαι ἐρεύθω ἐρευνάω ἐρέφω ἐρόθω ἐρέχθω ἐρεύθω ἐρέχθω ἐρέθω ? ἐρείδω ? ἐρείδω	όρέγω όρίνω όρούω όρύσσω ? όρεχθέω
λ	ἀλέγω ἀλείτης ἀλέξω ἀλέ(ϝ)ομαι ? ἀλείφω ? ἀλίνω ? ἀλώπηξ	ερημος ἐλαφρός ἐλαχύς ἐλέγχω ἔλεος ἐλεύθερος ἐλεύσομαι ? ἐλήλακα	όλιβρόν όλίγος όλισθάνω
μ	άμαρτάνω ἀμέλγω ἀμέλδω ²⁶ ? ἀμαλδύνω ? ἀμείβω ? ἀμέργω ? ἀμέρδω ? ἄμητος ? ἀμολγός		όμείχω όμίχλη όμόργνυμι
ν	ἀνεψιός ἀνήρ	ἐννέα -ηνεκής ? ἐνήνοθε	ὄνασις ὄνειδος ὄνειρος ὄνυξ
F	ἀείδω ἀείρω ἀέξω	ἔεδνα ἐείκοσι ἐέλδομαι	οίγνυμι ? ὀΐομαι

²⁶ See s.v. ἀμαλδύνω, p. 42.

BEFORE CONSONANT

	ἄεσα	ἐέργω	
	ἀηδών	ἐέρση	
	άημι	? εΐλη	
	? ἄεθλος		
	? ἀέλιοι		
	? αἰσθάνομαι		
κ	ἀκούω		
γ	ἀγείρω	ἐγείρω	
	? ἀγοστός		
π	*ἄπελος		
	? ἀπειλή		
φ	? ἄφενος		ὀφέλλω (2×)
			ὀφρῦς
			? ὀφείλω
δ			? ὀδών
B	? ἀθέλγω	? ἔθειραι	
		? ἐθείρω	
		? ἐθέλω	
σ	ἀστήρ	? ຂໍນ-	
	? ἀσφάραγος		

	α	3	0	tot.	tot.
ρ	2 (2)	10 (3)	4 (1)	16 (6)	22
λ	4 (3)	6 (1)	3	13 (4)	17
μ	3 (6)		3	6 (6)	12
ν	2	2 (1)	4	8 (1)	9
F	6 (3)	5 (1)	1 (1)	12 (5)	17
occl.	3 (4)	1 (3)	3 (2)	7 (9)	16
σ	1 (1)	(1)		1 (2)	3
tot.	21 (19)	24 (10)	18 (4)	63 (33)	96
tot.	40	34	22	96	

3. Conclusions

a. The Consonant before which the Prothetic Vowel stands

The first thing that attracts attention is that the prothetic vowel is much more frequent with sonants than with other consonants. Otherwise there seems to have been no limitation, since the occlusives occurring represent all categories:

For the absence of the *i* see p. 95 ff.

b. The Timbre not exclusively a

Feder,²⁷ Harl,²⁸ Winter, Georgiev, Carnoy, Seiler, Austin²⁹ and Adrados regard only a as the original timbre of the prothetic vowel; the same idea was also recently expressed by Szemerényi, *Syncope*, p. 205: "(IE **rep*- developed a) prothetic vowel which, as is normally the case, was α " (based on Schwyzer, p. 412).

It seems to me that this idea is disproved by the facts. A glance at the survey of the material is enough to make it evident that all three vowels are well represented. It would be misleading to work with percentages here, as the material is too scanty for that and the classification into more or less probable is not a strict one and therefore cannot be binding.³⁰ But the total number of cases of α is certainly not so much greater that it is justifiable to regard a as the original timbre. The number of 'certain' cases of α (21) is in fact less than that of ϵ (24). However, the idea of the 'original α ' dies hard.

For ε and o assimilation or influence of the following consonant is assumed when starting from the idea that α is original. However, assimilation is uncommon in Greek. The material has been studied by J. Schmidt, KZ 32 (1893) 321-94; the cases are given in Schwyzer, p. 255 f., including various ones which are dubious. Cf. Buck, Gr. Diall., p. 43 f., Lejeune, $Trait\acute{e}$, p. 208, and cf. his index p. 348. There is even less evidence of influence of consonants on vocalism; Lejeune, $Trait\acute{e}$, pp. 209 f. Thus Adrados posits that before μ and ν one almost always finds o. Whilst in the definite cases one can speak of a certain preponderance of o, ἀμέλγω, ἀνήρ and ἐνεγκεῖν (-ηνεκής) are enough to guarantee the existence of the other vowels. Moreover, it is quite possible that several of the less certain cases of $\alpha\mu$ do have a prothetic vowel. But the principal objection is that in four cases against two (ov: $\alpha\nu$) one cannot speak of preponderance on account of the small number (let alone in three against three, $o\mu$: $\alpha\mu$). One can say no more than that with ρ the ε is very frequent and that on the other hand no case is known of $\varepsilon\mu$.

The possibility of assimilation cannot, of course, be denied. For instance, I can explain ὀροφή: ἐρέφω only by assimilation (see below). It may be true that with prothetic vowel ε the stem usually has ε (but ἐρωή, ἐλαφρός, ἐλαχύς; ἐρυθρός etc.);

²⁷ Unprinted thesis (Vienna) of 1920 (?), quoted by Harl.

²⁸ KZ 63 (1936), 1-28.

²⁹ Lg. 17 (1941), 83-93.

³⁰ Ruijgh, *L'élém. ach.*, p. 20, points to the dangers of this in a survey of the occurrence of ἀτάρ in Aristophanes. In works with about the same number of verses as Pax (1359) and Lysistrata (1320) a difference of frequency of 1 against 2 would give an average of 1 in 1359 or 1 out of 660 verses. These figures have, of course, no value.

opposed to this is the fact that in the same case α often occurs. It should also be borne in mind that e-vocalism in the stem is after all the most frequent case. There is hardly any evidence of correspondence between prothetic vowel o and e-vocalism in the stem (ὀρούω, ὀμόργγυμι).

With regard to the timbre of the prothetic vowel before F, Solmsen, *Unters.*, p. 266, says: "In wahrheit wissen wir ja gar nichts darüber, von welchen bedingungen es abhing ob der stimmton, der vor der artikulation des μ angeschlagen wurde, sich zu ϵ oder α gestaltete".

Consequently practically nothing may be perceived of influence of the following phonemes on the timbre of the prothetic vowel, so that we are obliged to admit that the prothetic vowel could be ϵ or o as well as α .

c. The Timbre Constant

Another question is whether prothetic vowels of different timbre could occur with one and the same stem. There are a number of cases that suggest this. They will be discussed here.

Connecting ἀμέργω 'to pluck' with ὀμόργνυμι 'to wipe off' should be abandoned on account of the difference in meaning. Ἀμιχθαλόεσσα can best be connected with ἀμυγδάλη instead of with ὀμίχλη. The interchange ι/υ and χθ/γδ in that case points to a non-IE substratum language (see Leumann, *Hom. W.*, p. 214 n. 8). It does not seem correct to connect ἀρεπυια with ἐρέπτομαι, p. 35.

Assimilation must be assumed in a number of cases. Mention has already been made above of ἐρέφω: ὀροφή (Od.), ὄροφος (Orac. ap. Hdt. 7.140), ὑψόροφος (Il.) as against ὑψ-ε/ηρεφής (Il.), of which the second syllable evidently has another apophonic phase, i.e. * $\hbar_1 robh$ ->*ἐροφ-> ὀροφ-. For ὀδύνη from *ἐδύνη (which probably does not have a prothetic vowel) assimilation is probable. 'Οδών may therefore also be explained from *ἐδών. In a case like ελετρυγονα (Schwyzer, p. 256) too, nobody will assume another prothesis.

A few cases more difficult to interpret remain. For instance, beside ὀμείχω one finds in Hesychius ἀμῖξαι οὐρῆσαι ἢ ἡχῆσαι (ἐκχύσαι Latte) ἢ ὅμιξαι, whilst μοιχός is also connected by some with it. This recalls the interchange to be discussed below in non-IE words, although ὀμείχω is definitely IE. Is it to be ascribed to a less civilized linguistic stratum? On account of its meaning the word may have been subject to expressive transformation. Cf. Frisk I 449 on ἔθρις ἄθρις ὅθρις ἵθρις (likewise definitely IE, while ablaut is not probable). Possibly comparable with ὀμείχω — ἀμῖξαι is ὄνειρος — Cret. ἄναιρον, for which assimilation may also be considered (cf. ἀνασίφορον — 'Ον- Schwyzer, p. 255; ibid., p. 256 otherwise on ἄναιρον: influence of the preposition ἀνά). There are, however, still other cases in which α is found beside other prothetic vowel: ἐέρση — ἄερσαν τὴν δρόσον. Κρῆτες Hsch. (i.e. Cretan, as ἄναιρον); further perhaps ἀέλιοι — εἶλίονες, if *ħ₁μel-. Here one could therefore assume a development to α of all laryngeals in Western Greek. See for this p. 260 f.

In non-IE words which have evidently been borrowed from a substratum language an interchange may be pointed to, besides which forms without prothetic vowel also occur (cf. for this the following section): ἄστλιγξ — ὅστλιγξ, ἀσταφίς — ὁσταφίς — σταφίς (σταφυλή), ἀκορνός — ὀκορνός — κόρνοψ, ἀτρυγηφάγου — ὀτρυγηφάγος — τρύγη. I am not aware of cases of this kind with ε, unless Ἐρίων Ἀρίων Ὁρίγων (Schwyzer, p. 521 n. 3) belongs here. Compare with this the interchange o/α in for instance μολόχη μολάχη μαλάχη.

Some questions thus remain unanswered here. However, the cases mentioned do not seem adequate to me for assuming an arbitrary interchange $\alpha/\epsilon/o$ in the prothesis with IE inherited words. In my opinion the very comparison with the non-IE forms demonstrates that. I therefore consider it justified to conclude that the prothetic vowel had a fixed timbre, either α , or ϵ , or o.

d. The Prothesis Constant

For prothetic vowel before F see p. 76 ff.

The immediately following question is whether there is an interchange of forms with and without prothetic vowel. More examples are given of this, but they are scarcely more convincing than those in the preceding section.

In the first place there is a large group with (ἀ)σC-, which seem to be non-IE: (ἀ)σπάλαξ (π/φ), (ὰ)σκαλαβώτης, (ἀσ)κάλαφος, (ἀ)σφάραγος, (ἄ)στάχυς, (ἀ)στεροπή (ἀ)στράπτω, ἀσκαλώπᾶς : σκολόπαξ, (ἀ)σταφίς (ὀ-).³¹ The following also appear to be non-IE: ἀκορνός (ὀ-): κόρνοψ, ἀτρυγηφάγου (ὀ-): τρύγη, ἀτταγήν : ταγήν, ἀμαρυγή : μαρμαρυγή, ὄβριμος (ὄμβριμος) : βριμός, ἀβρυτοί (ἄμβρυττοι) : βρύττος (σσ), ἀνθρήνη : θρώναξ, ἄνθρωπος : δρώψ. The same applies to ἀγρεῖφνα ἀγρίφη 'harrow' if connected with γριφᾶσθαι· γράφειν. Λάκωνες Hsch.; ὀλόπτω ὀλούφω : λέπω; ἀληνής· μαινόμενος : λῆναι 'Bacchantes' and probably also ὀκιμβάζειν : (σ)κιμβάζειν.

Less clear are words like (ἀ)μαυρός, ἀφαῦρος : φλαῦρος (?); for (ἀ)λαπάζω see p. 80).

Other cases are based on unreliable etymologies, βέλος: ὅβελος (Austin), ἀδαγμός: δάκνω, ἀταλός: τᾶλις (Adrados, p. 347), ἀγανός: γάνος, ἀνήρ: δρώψ. (Ἑ)χθές and (ἐ)νέρθε do not have a prothetic vowel. Θέλω is secondary in respect of ἐθέλω. The connection ἐρωή — ῥώομαι is improbable. That of ἀλείφω with λιπ' also seems incorrect. The form λάχεια (ι 116 κ 509) cannot be automatically identified with ἐλαχύς, as Chantraine, *Gr. Hom.*, p. 183 Add. does; see Frisk. The relation ῥοχθεῖν — ὀρεχθεῖν is also dubious. For ἀμαλδύνω — βλαδύς see p. 42. Ὁλίγος: λοιγός is more difficult. Ὁμείχω: μοιχός is comparable. See for these cases p. 75 f. However, for the form μόρξαντο (Q.S.) of ὀμόργνυμι see Frisk II 390.

Then there are cases in which prothetic vowel stands beside s movable. This is discussed in detail on pp. 82 ff. Such a situation is obvious in μέλδομαι 'to (cause to)

The examples are taken from Kuiper, Μνήμης κάριν.

melt' (Φ 363), OE meltan, OIcel. (s)melta, OHG smelzan, beside which Hesychius gives ἀμέλδειν τήκειν. If the interpretation given on pp. 82 ff. is correct other cases can be explained in this way, for which cases with s movable cannot be pointed to. For instance, one finds beside ἀμέρδω 'to rob' in Hesychius μέρδει κωλύει, βλάπτει and μερθεῖσα στερηθεῖσα, ἀμερθεῖσα. For the absence of prothetic vowel in Hesychius (and other glossographers) see, however, Latte, Prolegomena XXX. Cf. the gloss ἴγνυντο ἡνοίγοντο Hsch.

Although there are some difficulties here — in my opinion the most serious are μ oιχός, λ οιγός with perhaps ροχθεῖν and in the second place the type μ έλδο μ αι, μ έρδειν — compared with the totality of forms with prothetic vowel the material does not seem enough to support the assumption that forms of IE inherited words with and without prothetic vowel occurred side by side without any rule. Another explanation of the forms mentioned will have to be sought. With the Mediterranean words, on the other hand, this possibility certainly existed. Here one could therefore speak with more justice of "prothetic vowels", although of course we know nothing about the origin of the phenomenon within that linguistic system. Here too precisely the comparison with the interchange $\alpha/o/z$ ero in the words of non-IE origin shows that the prothetic vowel is a fixed element in the IE words.

e. Final Conclusion

For many years the prothetic vowel, as an element that could be added or not in an unpredictable fashion (hence the name), was used as a deus ex machina for the solution of etymological and morphological problems. For instance, this was still done by Chantraine in his Grammaire Homérique and by Frisk. Cf. Szemerényi, Syncope, p. 112: "in view of the fact that prothesis is undoubtedly found in many cases, there is no pressing need for trying to avoid it (here)". In Morph.2, pp. 187 f. Chantraine even calls the è- of ἐσκέδασμαι a prothesis. This has in turn contributed to the incorrect concept of the prothetic vowel and on the other hand hampered the solution of the problems for which it was used. An analysis of the material shows that the so-called prothetic vowel in IE inherited words in Greek is a fixed element of fixed timbre, α, ε or o. As almost always, there are a number of cases that seem to be an exception to the rule, but these are not strong enough to discredit the rule.

As has been clearly stated, this conclusion applies solely to prothesis in IE inherited words. In words of Mediterranean origin, on the other hand, neither the timbre nor the prothesis as such is constant (ἀσταφίς ὀσταφίς). It must also be remarked in this connection that in these substratum words no prothetic vowel ϵ is found, while in the IE 'prothesis' this occupies at least as important a place as α and o.

This conclusion regarding the nature of the Greek prothetic vowel in IE inherited words is of eminent importance. For the fact that this prothetic vowel forms a fixed element of the root (and therefore the stem), and the fact that it corresponds exactly to a prothetic vowel in Armenian, calls for the conclusion that a separate phoneme of the basic language is reproduced here. The strict opposition of the three

timbres in Greek suggests three different phonemes. The identification of these three phonemes with the three laryngeals, which were assumed on theoretical grounds, and of which Greek has preserved the opposition elsewhere too, is practically inevitable. One could even, without further support, postulate these three phonemes on the strength of the prothetic vowel alone. For the nature of the phoneme see p. 94 f.

There is no compelling reason to assume that PIE did not have any root beginning with r-. Nor is there any reason to assume that PIE r- would have been given a prothetic vowel in Greek, as for instance Frisk (s.v. 2. $\dot{\rho}$ έζω and $\dot{\rho}$ υκάνη) seems to do.

4. Special Problems

α. Νέφος

Nέφος has acquired a certain fame in this discussion (see for instance Lejeune, REA 45 (1943) 133). Kuryłowicz, Eos 30.208, already regarded it as a drawback to his explanation of the prothetic vowel. Nέφος has many cognates with the same root form and sometimes the same stem, Skt. nábhas-, Av. nabah-, OCS nebo, Lith. debesis, Hitt. nepis. But Skt. ambhas- 'water' is also compared with it. The ablaut *nebh-: *embh-(ombh-?) < *enbh- is traced back according to Benveniste's scheme to * \hbar n-ebh-: *ħen-bh- and for *ħnebh- a Greek development *ἄνεφος (perhaps ἐ- or ὀ-) is expected. However, this reasoning holds good only if one starts from the assumption that every PIE root began with a consonant, which has not been proved; see p. 90 ff. Here *n-ebh-: *en-bh- would be possible. Moreover, in view of the meaning, ambhas-'water': νέφος 'cloud', relationship is by no means certain. Skt. ambu 'water' therefore need not belong to νέφος either (Mayrhofer, I 45). Arm. amb 'cloud' may come from *mbho-, as also Skt. abhra- 'cloud, rainy weather', Av. awra- 'cloud, rain', Lat. imber. The latter words are often classified with ὄμβρος; Frisk does this, for instance. And yet the sound law $mbh > \mu\beta$ is not tenable (cf. the words ἀμφί, ἀστεμφής, γόμφος, νύμφη, ὀμφαλός, ὄμφαξ, ὀμφή, πεμφρηδών, πομφόλυξ, σομφός; for v9 one would then expect νδ, but cf. ἄνθρωπος, ἄνθος, ἴονθος, κάνθαρος, μίνθος, πλίνθος, σμίνθος, σπινθήρ, τενθρηδών, ὄνθος); the examples in Schwyzer, p. 333 β, strongly convey the impression that they are non-IE; this is the case with κορυφή: κόρυμβος, σκιφία : κιμβεία (Frisk s.v. κίμβιξ), ταφεῖν : θάμβος (cf. p. 177), κιθάρα : κινδαψοί, πυθμήν: πύνδαξ; cf. σκινδαρεύεσθαι/σκινθαρίζω (σκανθ-) (for the prenasalization see Introduction, p. 13). This does not necessarily imply that ὄμβρος is non-IE (which Szemerényi assumes without further argumentation, Syncope, p. 249), but it does mean that it cannot be considered to be cognate with νέφος or Skt. abhra-.

There is consequently no reason to regard $v \in \varphi \circ \varphi$ as an objection to the explanation of the prothetic vowel with the aid of the laryngeal theory.

b. Forms with and without Prothetic Vowel before o-Vocalism of the Stem
In addition to the cases mentioned, ὀλίγος: λοιγός, ὀμείχω: μοιχός, ὀρεχθεῖν:

ροχθεῖν (?), there is also ἀνήρ: νωρ-; cf. Kuiper, Νώροπι χαλκῷ. As this etymology is of importance to this phenomenon, it is necessary briefly to summarize his argumentation. It is not feasible to translate words like εὐήνωρ, ὑπερηνορέων, when one assumes that they have been composed with ἀνήρ. When comparing ὑπερηνορέων with ὑπερμενής, ὑπερμενέων one is led to assume a substantive *ἀναρ, *ἀνερ 'vital strength'. For the meaning of the old locution εὐήνορα χαλκόν ('animated by a divine potency') compare ζς ποταμοῖο, πυρὸς μένος, ἀνέμων μένος, μένος ἠελίοιο (Lucr. fortis equi vis, vis violenta leonum). This view is confirmed by Ved. sūnára-, Av. hunara-, OP huvnara- (the length of the \bar{u} being explained by the laryngeal before the n, $*h_2ner$; see p. 93 f.), which also cannot be connected with nar- 'man', but must be interpreted as 'full of vital strength'. Other cognates are Ital. ner- (cf. Nerio Martis) and Lith. nóras 'desire, will', which has been compared with Gr. νωρεῖ· ἐνεργεῖ Hsch. (so that therefore *ἀναρ, *ἀνερ could be represented by ἐνέργεια). This verb has probably been derived from an adjective *νωρος, preserved in νώροπι. The ending -ow is evidently in accordance with αίθοψ, the locution νώροπι χαλκῷ in accordance with (βῆ δὲ διὰ προμάχων κεκορυθμένος) αἴθοπι χαλκῷ ($10 \times$), in the first instance Η 206 Π 130 (κορύσσετο) νώροπι χαλκῷ. This therefore replaces an older *νωρον χαλκόν, which is consequently on a par (semantically) with εὐήνορα χαλκόν. (The article gives numerous supporting details which cannot be listed here.)

It may be immediately established that, as might be conceivable in itself, $v\omega\rho\sigma\pi\iota$ did not develop through a false word division from *å $v\omega\rho\sigma\pi\iota$, since the gloss $v\omega\rho\epsilon\tilde{\iota}$ evidently reproduces an independent tradition. Loss of laryngeal in composition (this is discussed in detail on p. 242 f.), if $v\omega\rho-o\pi$ - may be regarded as a compound, cannot be considered here either, in view of $v\omega\rho\epsilon\tilde{\iota}$.

Comparison of the above cases with $\alpha\nu\eta\rho$: $\nu\omega\rho\sigma\pi\iota$ recalls Meillet's idea (Diall. i.e., pp. 68 f.) that laryngeal disappeared when the stem had o-vocalism. This is discussed in detail on p. 238 ff. One could adduce $\varepsilon\nu\eta\nu\sigma\rho$ against this, but this is not relevant. E $\nu\eta\nu\sigma\rho$ itself cannot go back to $\hbar_1su-\hbar_2nor$ -, since this would have given $\varepsilon\nu\nu\sigma\rho$ -. It might be assumed that $\varepsilon\nu\eta\nu\rho\sigma\alpha$ is only a modernization of $\varepsilon\nu\nu\rho\alpha$ (perhaps under the influence of the compounds with $\varepsilon\nu\eta\rho$), but this does not seem probable, since Greek does not have a single other compound of this type (as opposed to Vedic; $\varepsilon\nu\nu\alpha\sigma\rho$ - cannot be $\varepsilon\nu\rho\rho$ - either, since this would have become $\varepsilon\nu\rho\rho\rho$ - one must therefore start from $\varepsilon\rho\rho\rho\rho\rho$ - its seems probable that $\varepsilon\nu\rho\rho\rho\rho\rho\rho$ has been composed from $\varepsilon\nu\rho\rho\rho\rho\rho$ - (i.e. $\varepsilon\rho\rho\rho\rho\rho\rho\rho\rho\rho\rho\rho\rho\rho\rho$ -). It seems probable that $\varepsilon\nu\rho\rho\rho\rho\rho\rho\rho\rho\rho\rho\rho\rho\rho\rho$ - has been composed from $\varepsilon\nu\rho\rho\rho\rho\rho\rho\rho\rho$ - (i.e. $\varepsilon\rho$ -). On the other hand, in $\varepsilon\rho$ - its laryngeal must have disappeared before it was vocalized. One therefore has the following situation:



In this scheme λοῖσθος 'last' (Ψ 536) would also fit, if it were connected with ὀλισθεῖν; however, since this alternates with a stem *slidh-, λοῖσθος can also be explained differently (pp. 84 ff.). If ἐέρση goes with Skt. νάτςατί, οὐρέω³² can go back to *μοτς-. Βut μόλγος ('βόειος ἄσκος Poll.) has nothing to do with ἀμέλγω.

There is not much material to show that the laryngeal was preserved with o-vocalism of the stem. Words like ἀλοιφή ἀλοίτης ἀοιδός ὀροφή may have their prothetic vowel through analogy. There remain ἀκούω ἀγοστός ἀμολγός ἐρωή ὀδών (?).

It will be clear that this problem cannot be regarded as solved. In itself it is simple to assume that in these cases the laryngeal was not vocalized, but it should then be stated when this happened and when it did not. I see no possibility of doing so at present. However, I do not believe that the conclusion of p. 73 is affected by these facts. It is not so that in words that are further identical a frequent interchange of forms with and without prothetic vowel occurs, as in those of Mediterranean origin.

c. Prothetic Vowel before F

The situation seems more complicated with * $\hbar_1 \mu$. There are clear examples of ξ_F , $\xi_E \delta \nu \alpha$ $\xi_E \delta \nu \alpha$. However, against this is the fact that in Doric $\xi_E \delta \nu \alpha$ the prothetic vowel seems to be lacking, while the same situation apparently occurs in Dor. * $\xi_E \delta \alpha$: $\xi_E \delta \nu \alpha$: $\xi_E \delta \nu \alpha$: $\xi_E \delta \nu \alpha$; $\xi_E \delta \nu \alpha$ where, however, there is a possibility that the Doric form goes back to a synonym with s-. If one assumes that * $\xi_E \delta \nu \alpha$ is based on * $\xi_E \delta \nu \alpha$ in my opinion the possibility of another origin may not be excluded — dialectally different development should be considered here.

However, the situation becomes different if forms like ἐέρση/ἕρση stand side by side in one dialect. In our Homer text such forms do indeed alternate, but this seems to be confined to Homer. Here various possibilities occur. Firstly it is possible to

32 And yet this connection seems in no way certain. In the first place it is striking that in ἐέρση the group ρσ has been preserved, and not in οὐρέω. Then the development ρσ > ρ with compensatory lengthening is by no means certain (Schwyzer, p. 285; Lejeune, *Traité*, p. 107; βούλομαι is in my opinion very uncertain; χείρ goes back to *ghesr-, see for instance Schmitt, *Idg. Dichterspr.*, p. 145 ff.). Must οὐρέω be connected with Hitt. še-e-hur 'urine', as *soħ₁ur- > οὐρ-? In that case the absence of aspiration is unexplained, but the group ού- rarely occurs (only οὕ οὕνεκα οὕτος).

ascribe each of the separate forms to one of the dialects that have contributed their share to the epic language. It is, for instance, conceivable that the forms without prothetic vowel stem from Aeolic; compare Ιρος: ἱερός, infra p. 184 f. One must be prepared for the possibility that in all Greek literature the use of both forms on Homer's authority might be permitted, certainly in the case of words which had disappeared from the living language, so that one should be very careful about interpreting especially one single form in a literary dialect (e.g. in Aeschylus, Pindar, Theocritus). In epic language possible doublets were, of course, gratefully used, both by the original authors and later in order to solve difficulties caused by modernization. If, therefore, forms with and without prothetic vowel occur side by side in Homer, this in no way proves that they belonged to one dialect and that actual interchange therefore occurred.

However, a question which must first be considered is whether such cases are based on reality in the living language. In the discussion of the words in question it has appeared that these doublets are in part artificial ones. For instance, ϵ (ση is clearly an artificial form, as is ϵ εισάμενος, both having developed through a false word division in old formulas. The "Leumann method" (cf. in particular *Hom. W.*, p. 48 ff.) certainly gives the solution here. It should be stressed again that this method must be employed with the greatest caution. Every case should be considered separately.³³ Other cases are less clear. However, it should be borne in mind that the process which can still be demonstrated in the case of the two words mentioned may in other cases have been completed in an earlier stage, so that the two forms in our text of the *Iliad* and *Odyssey* could already have been used interchangeably without distinction. The development of the form ϵ 00 and the epic still seems apparent. It is not probable that in Homer a form ϵ 00 occurs beside ϵ 60 and ϵ 10 in the epic still seems apparent.

A starting-point for these artificial doublets may have been the occurrence side by side of ἐέλδομαι and ἔλπομαι and also — later — of εἴκοσι beside ἐείκοσι (infra). It may be wondered whether the interchange of forms with and without augment (ἔειπον: εἴπον) supported this development. The feeling of uncertainty is, of course, enhanced here owing to the fact that in the course of time the F disappeared, so that the ἐε-(<ἐFε-) that now came into being could be regarded as a repetition of the ἐ-of the stem (κατὰ πλεονασμοῦ τοῦ ε). As a result it became comparable with for instance the diectasis (εει, οω) and the metrical lengthening of the first vowel (ει for ε) and in this way proceeded to form one of the specific peculiarities of the epic language. Cf. Hes. Th. 145 ἕεις for εῖς (see West, ad loc.), Emp. ἐέδμεναι, Certamen 140 ἐειρόμενος (Solmsen, Unters., p. 254).

In my opinion ἐείκοσι/εἴκοσι again forms an entirely different case. Here the second form stems from a later linguistic stage (εἴκοσι < *ἐϝῖκοσι), not from a variant without prothetic vowel (*ϝείκοσι).

For the dangers of the method see the parody given by Ruijgh, L'élém. ach., p. 103: ὀφρῦς from *ὁπὸ φρυσί.

The situation with reference to ἐέργω is so complicated that the historical development can only be guessed at. Here again we have a confused situation which is a linguistic reality, not merely an artificial one from poetic language.

Although a few problems of detail remain here, it does not seem permissible to me to assume an interchange of forms with and without prothetic vowel before F within one dialect.

d. Austin's Interpretation

A supposed interchange like $\dot{\epsilon}\dot{\epsilon}\rho\sigma\eta$: $\ddot{\epsilon}\rho\sigma\eta$ has been explained by Austin, Lg. 17 (1941) 88-91, as a continuation of laryngeal + shwa secundum and laryngeal alone respectively (in his notation $H_b:H$). As a basis for all prothetic vowels he assumes the group H_b . For the moment this view may be left out of consideration. The solution which this theory renders possible for the problem dealt with here — assuming that such exists — seems attractive, but there are fundamental objections to it:

- (1) it is methodically incorrect to reduce the origin of differing developments within one linguistic group to differences in the proto-language. This requires at least agreement between two languages or linguistic groups, while this in itself need not necessarily go back to an original difference in the basic language.
- (2) there is no apparent reason for the difference in formation between *Abuers- and *Auers-; apart from the problematic anlaut, the forms ἐέρση and ἕρση are absolutely identical. It is therefore not probable that there were two different basic forms here.
- (3) it does not explain why this phenomenon occurs only before u. After all, one would also expect the same difference in basic form with the other consonants.

These considerations are enough to drop this explanation. Moreover, cf. p. 94f., where it is demonstrated that the prothetic vowel does not go back to H_b . The alternative H_b : H then disappears.

e. Spiritus Asper: Lenis

Another question is that of the difference between the two representations of (as it would appear) PIE μ -, which sometimes gives aspiration and sometimes does not. The other languages have nothing that corresponds to this.

It should be stressed that Homer's text is not a reliable starting-point for spiritus asper: lenis; see Chantraine, Gr. Hom., pp. 184-8, in particular 187 f., for ἕρξα from ἕρδω, i.e. ἕρδω, where the aspiration was introduced by the grammarians to distinguish it from ἕρξα derived from ἐέργω.

In part the aspiration may have been caused by forms with s movable. However, this solution remains hypothetical as long as this s is not apparent in one of the other languages.

Nor can the idea expressed by Sommer, *Griech. Lautstud.*, p. 83 ff., that spiritus asper appears when s stands at the end of the first or the beginning of the second

syllable, be regarded as an adequate explanation. Cf. Schwyzer, p. 226 f., and Lejeune, *Traité*, p. 149 f.

Attempts have also been made to ascribe the aspiration to the laryngeal, for instance by A. C. Juret, *Phonétique Grecque* (1938), p. 65 (as also Austin in the article discussed in the previous section). Juret assumes that $\hbar_1 \psi$ - resulted in aspiration. He mentions two cases of this, $\delta \rho \acute{\alpha} \omega$ and $\mbox{e}\nu \nu \nu \mu \nu$.

ἕννυμι, Skt. váste, is derived as *ħues- from a root *ħeu- on account of Lith. aũti 'to don footwear'. In view of Hitt. ues- this ought to be \hbar_1 . Lith. aũti then comes from *ou-, and likewise Lat. ind-uo etc., Umbr. anouihimu. Arm. aganim does not prove a-vocalism (Hübschmann, Arm. Gr., p. 411, from *ou-). However, from *ħ₁ues- one would expect prothetic vowel in Greek, to which nothing points. This reasoning, like that with reference to νέφος (p. 74), is based on the idea that the IE root could begin only with consonant, an assumption that has not been proved (and in my opinion is not probable); see p. 90 ff.. One can start from *eu-: *u-es-.

The two examples are therefore no proof.

In the article quoted above in which he discusses this theory Lejeune suggests that the interchange $\xi \epsilon \delta v \alpha/\xi \delta v \alpha$ can be explained by means of the laryngeal theory. Here the questions arise that were discussed above (p. 76 ff.). Forms like $\delta \epsilon v = \delta v = 0$ cannot be explained in this way.

The aspiration that is found in Heraclean (-hερξοντι: ἐέργω) proves little, since this dialect evidently had a secondary extension of aspiration. Cf. Buck, Gr. Diall., p. 54 (cf. hισος).

In itself the development $\hbar_1 u > h$ - is conceivable, but clear material would have to be given for it. However, it should be borne in mind that the forms with aspiration from PIE u are general Greek, while for $\hbar_1 u$ - a development ϵ_F - has been established in some dialects at least. The forms with ϵ_F - would then have to be explained in another way, which is improbable in the context of the problem of the prothetic vowels.

f. "Laryngeal Reflexes in Homer", Austin

Under this fascinating title Austin, Lg. 17 (1941) 83-92, put forward an idea which, strangely enough, found some approval. It was rejected by Messing, HSCP 56-7 (1947) 194-6, and Cowgill, p. 119.

Austin posits that sometimes one does not find prothetic vowel where one would expect it, as in νέφος; see p. 76ff.. However, in these cases one sometimes finds

lengthening of the preceding vowel in Homer. According to Austin this is due to the laryngeal, just as the lost s- sometimes still makes position. Kuryłowicz, Eos 30.208, had already put forward this idea, but he nevertheless did not assume that an old situation had been preserved here.

According to Austin, besides νέφος, the forms λόφος, λαπάρη, λίπος λιπαρός and μαλακός belong to this category. Nikitina, *Voprosy jazykoznanija* 9 (1962) 81-3, adds ἀπο̄ρέρση and ἄρᾱ ϝέρξαν.

It is difficult to prove this idea, since the phenomenon, even with *sr*-, *sl*- etc., is not constant, Chantraine, *Gr. Hom.*, p. 175-8 (ἔλαβε, ἔληγε, ἀπολήγει; κατὰ μοῖραν ἔειπες fin.).

It is general knowledge that in the epic this phenomenon has been extended to cases in which s movable (and also laryngeal) is excluded ($\delta\pi\delta$ μήτηρ, δ $\delta\nu\alpha\tau\delta$ $\epsilon\pi\sigma\varsigma$, op. cit., p. 146). There is thus a solution for the phenomenon which makes the assumption of a second cause superfluous, if not impossible. (This criticism was already made by Adrados, Estudios, p. 34 n. 4.)

A more serious objection is the chronological one. While the s- in $\sigma\mu$ - and the F have here and there still been preserved down to historical times, the disappearance of the laryngeal as independent phoneme seems to have taken place much earlier. In any case it had already assumed in Mycenaean the form later known (akere, arepate, enewopeza, ereutero; ijero, anemo, ereta, rewotorokowo; it is not clear whether s before sonant in Mycenaean was still spoken, since the s- was not written before other consonants as well (tatomo 'stathmos'), which is a purely graphical matter.

However, the essential point is how we are to conceive of the subdivision of 'prothetic vowel' and 'double consonant'. Originally this is, of course, a sandhi phenomenon: prothetic vowel after consonant, lengthening of preceding vowel. It is conceivable that this relation was preserved in the oldest formulae of the epic (leaving the chronological drawbacks out of consideration), but in that case one would expect forms with and without prothetic vowel from the same stem side by side. However, this is not the case (for $\lambda\alpha\pi\acute{\alpha}\rho\eta$: $\mathring{\alpha}\lambda\alpha\pi\acute{\alpha}\zeta\omega$, $\mathring{\alpha}\rho\ddot{\alpha}$ $F\acute{\epsilon}\rho\xi\alpha\nu$: $\mathring{\epsilon}\acute{\epsilon}\rho\gamma\omega$ see below). Moreover, one does not find the examples mentioned in old formulae.

These theoretical considerations seem sufficient to me to refute the idea. As regards the examples given, I believe that original laryngeal is plausible for none of them, except perhaps ἄρᾶ ϝέρξαν.

For νέφος see p. 74.

Austin connects $\lambda \circ \varphi \circ \varsigma$ with $\alpha \wedge \varphi \circ \varsigma$. Lat. albus, which is not probable semantically speaking. Cf. below.

 λ ίπος etc. may in my opinion not be connected with ἀλείφω; see p. 40.

 $\lambda \alpha \pi \dot{\alpha} \rho \eta$ 'side' is connected with $\lambda \alpha \pi \alpha \rho \dot{\alpha} \zeta$ 'soft, slack'. The fact that Aeschylus uses $\lambda \alpha \pi \dot{\alpha} \xi \alpha \iota$ ($\lambda \alpha \pi \dot{\alpha} \sigma \sigma \omega$ 'ἐκκενοῦν' since Hp.) in the same meaning as ἀ $\lambda \alpha \pi \dot{\alpha} \zeta \omega$ 'to destroy'³⁴ does not entitle us to regard the stem of $\lambda \alpha \pi \dot{\alpha} \rho \eta$ and ἀ $\lambda \alpha \pi \dot{\alpha} \zeta \omega$ as

 34 A. Eu. 562 λαπαδνόν Musgrave, codd. λέπαδνον, may, if correct, not be surprising in the same author.

identical, as Frisk s.v. ἀλαπάζω seems to do; s.v. λαπαρός he is more sceptical. One has rather the impression that ἀλαπάζω, -αδνός was linked by Aeschylus with λαπαρός and transformed after it. Cf. Ruijgh, $L'\acute{e}l\acute{e}m.~ach.$, pp. 74 f. Austin connects λαπαρός with Skt. $\acute{a}lpa$ - 'small' (which does not prove a laryngeal), but the cognate forms point in my opinion to sl-, see p. 84.

For μα λακός nothing suggests laryngeal.

ἀπο̄ ϝέρση, -σειε Φ 283. 329 (ἀπό̄ ϝερσε Z 348) has further nothing that points to laryngeal (ἀπ-ηύρα < -η-γρα proves nothing; η as augment for \digamma is general). Nikitina's connection with ἀείρω is not obligatory.

 $\ddot{\alpha}$ ρ $\ddot{\alpha}$ ρ $\dot{\epsilon}$ ρ ξ α ν ξ 411 is one of the two aroist forms in Homer of $\dot{\epsilon}$ έργω; see s.v. p. 62 f. It is highly implausible that so old a phenomenon, of which it would be the sole example, would have been preserved in so loose a connection ($\ddot{\alpha}$ ρα).

The cases of lengthening before ρ λ μ ν and a few other consonants have been collected by La Roche, *Hom. Unters.*, p. 46-67. It is striking that such lengthening occurs very often after δέ τε ἰδέ and prepositions and adverbs of two short syllables, διά ἐνί κατά ποτί ὑπό. One of the few formulae is ποσσὶ δ' ὑπὸ λιπαροῖσιν (B 44 K 132 Ξ 186 β 4 δ 309 ν 225 ν 126), while on the other hand in δεινὸν δὲ λόφος καθύπερθεν ἔνευεν (Γ 337 Λ 42 O 481 Π 138 χ 124) λόφος makes no position.

Summarizing, it may be said that there is hardly any argument in favour of this view, whereas there are serious objections and the phenomenon in question can easily be explained in a different way. (In general Austin's article does not contribute to elucidation of the problem. Compared with Kuryłowicz's treatment, it means a step backwards.)

g. Hammerich's Interpretation

Reference should also be made to an idea by Hammerich, Lar. b. Son., p. 9-12. This runs as follows. PIE $\hbar n$: n-: sn- became in Greek $\hbar n$ -: n-: hn-, the last two coinciding, so that an opposition $\hbar n$ -: n- remained. Where he finds prothetic vowel in Greek beside forms in other languages with s movable, $\partial \lambda \log \dot{\alpha} \omega : \lambda \tilde{\epsilon} \mu \alpha \xi$, Russ. $slim \dot{\alpha} k$, he ascribes this to a confusion between $\hbar l$ - and h l- in Greek.

There are various objections to this view. Although hn would have coincided with n-, it could nevertheless be confused with $\hbar n$ -. This is surprising, for in that case one would expect instead that hn coincided with $\hbar n$ or that all three had the same reflex.

Moreover, the same question of chronology arises as in the preceding section. In my opinion the development was chronologically as follows: $\hbar n$ -: n-: n-:

Hammerich's following conclusion (p. 11) is stranger and more radical. With r-the situation was somewhat different. Here sr > hr- was preserved as $\dot{\rho}$ -. However, the combination sr- was so frequent "that it was necessary for the words with r- to keep clear of them. ... there was no choice for the words with r-: they had to fuse with the words with Hr-". It has still to be demonstrated that sr- was much more frequent than sl- etc., but even if that were the case, Hammerich's conclusion is by no means

obligatory: it cannot be seen why Charybdis is to be preferred to Scylla. On the strength of this he posits that for instance ἐρυθρός ἐρέφω ἐρέχθω ἐρείπω ὀρύσσω ὀρέγω, although from PIE r-, acquired a prothetic vowel.

In this way then he explains on the one hand prothetic vowel beside s movable and on the other hand prothetic vowel before PIE r. This is entirely arbitrary. The author does not have the slightest argument for making the developments supposed by him plausible. And (p. 12) "On the other hand the transition of r- to Hr- was no sound law; there was a choice (but above "there was no choice") between two possibilities". This makes the argument as tenuous as that of Adrados (p. 29f).

Such vague assertions characterize Hammerich's whole article. For instance, he explains (p. 31) Lat. augeo, Goth. aukan and Gr. αὕξω from *ħug-, which also would suggest a form *ħug- and thus a prothetic vowel in Latin etc. too It is not feasible and also unnecessary to discuss all his considerations.

5. LARYNGEAL AND S MOVABLE

a. The Theories of Hoenigswald and Nikitina

Hoenigswald wrote an article under the title *Laryngeal and* s *Movable*, *Lg.* 28 (1952) 182-5, which may be of importance here. The hypothesis is entirely unacceptable to me. His reasoning is as follows.

If s movable is to be interpreted as a prefix, one would also expect it before a vowel. However, so far it has not proved possible to demonstrate this. Hoenigswald renews the attempt, starting from the idea that every root in PIE began with a consonant, and that therefore those which apparently began with a vowel originally had a laryngeal at the beginning. Now, with the alternatives $He^-: sHe^-$, after s- the laryngeal was already lost in PIE, without the allophones e, a and o becoming phonemes. This therefore implies that $s\hbar_2e^-$ became se^- , like $s\hbar_3e^-$, and not sa^- and so^- respectively (whilst the forms without s movable thus gave $\hbar_2e^- > a^-$ and $\hbar_3e^- > o^-$).

Apart from the theoretical problem of prefixing in PIE, of which elsewhere no trace can be found, the starting-point, i.e. that PIE only had roots beginning with consonant, cannot be regarded as certain (p. 90 ff.). The further assumption $s\hbar_2e->se$ - is entirely arbitrary and improbable a priori, if only in view of the Hittite forms with ish- (e.g. is-ha-a-i 'to bind'; the i- is a prothetic vowel, cf. p. 18 n. 2). If, however, it should be proved by a number of reliable etymologies, it would have to be accepted. But the thirteen etymologies which he gives are far from reliable. He is aware of this and explains it by the fact that "the loss of laryngeal at an early period destroyed the regular relationship", after which "subsequent sound changes in the various IE dialects separated them even further". The second point is irrelevant, because it applies equally to the cases of s + (other) consonant, while here the forms with and without s are mostly entirely identical. However, the cases given here differ considerably in formation. Nor is the effect of the laryngeal in Hoenigswald's hypothesis

very great; it would give a-: se-, o-: se-, e-: se-. Only the first form of vowel interchange is unusual (beside which an ablaut form $\hbar_2 o$ -> o-: so- would have existed). It cannot therefore be seen that the supposed loss of laryngeal would have had such confusing consequences.

Nobody will accept the etymology ἀραρίσκω — Lat. sero (ἕρμα 'earring'!); Lat. ad — *sed- 'to sit' (ὁδός!). Semantically unobligatory are *ak- 'sharp' — *sek- 'to cut', Skt. āpnóti 'to reach' — Skt. sápati 'worships' (ἕπω), Skt. r- with árṇa- 'flowing, flood' — Skt. sárati 'hastens, flows', ἀμάω 'to reap' — Av. ham 'summer', ἄμη 'pail' — Lat. sentina 'bilge' (but in the first instance it means 'bilgewater'). The following seem better: ἀρκέω — ἕρκος, Lat. anus — senex, Lith. alpstù 'to faint' — silpnas 'weak', ἄνευ — Skt. sanutár, Goth. uf 'under' ufar 'over' — Lat. sub super. Finally Gr. ὄσσε — Goth. saílvan, Hitt. ša-(a-)ku-wa [sakua] 'eyes' (but see above for Hittite). The only case that appeals is *sup: *up, but here there is not the slightest indication of laryngeal, nor of disappearance and the consequences assumed for it.

The theory therefore remains improbable. However, it should be remarked that s movable before laryngeal is of course highly possible; there is, however, no reason to assume that the laryngeal would have developed differently in that case than in others.

Nikitina (in the article quoted on p. 80) draws attention to the connection between prothetic vowel and s movable, partly in imitation of Klyčkov, *Processy razvitija v jazyke* (Moscow, 1959), pp. 27 f. Like Hammerich, he explains $\partial \lambda \iota \sigma \vartheta \dot{\alpha} v \omega$ beside IE *sleidh- by the fact that sl- and $\hbar l$ - developed more or less simultaneously to l- and V l-respectively, whereby confusion occurred; see p. 81 f.

There are indeed facts here which call for an explanation. Nikitina is of the opinion that in Greek forms with prothetic vowel, without it, and with s movable stand side by side and gives the materal divided among six (etymological) units (the grouping within them is mine):

- (1) μέλδω βλαδαρός; μαλακός βλάξ; μῶλυς: ἀμαλδύνω ἀβλαδέως; ἀμβλίσκω ἀβληχρός; ἀμβλύς ἀμαλός: (ΟΕ smeltan).
- (2) λίγδην; λιπαρός; λεῖμαξ: ὀλίγος ὀλισθάνω ὀλιβρόν; ἀλείφω; ἀλίνω: (PIE *slei-g/b/dh-; ModG. schlecht, Goth. slaihts 'smooth').
 - (3) —: ἀείρω ἀπο̄ρέρση: (OHG schwer, IE *suer-).
- (4) λαπαρός: —: (Goth. *sleps, ModG. schlaff, Lith. slabnùs, Serb. slabina 'soft part of the side').
- (5) μαραίνω (Skt. mardayati): ἀμέρδω ἀμέργω (ὀμόργνυμι) ἀμοργός: σμερδνός (ModG. Schmerz, Lat. mordeo).
 - (6) μοῖος: σκυθρωπός: ἄμοιος: κακός. Σικελοί: σμοῖος: χαλεπός Hsch.

This material calls for further discussion. The last etymon loses considerably in value because it consists largely of glosses. Amolog is ascribed to the Sikehoi and may therefore very well be non-Greek (and even non-IE); cf. also σμυός σκυθρωπός Hsch. The whole is too unreliable to serve as the foundation for a new theory.

Re 4. Whether Goth. *slepan* etc. belongs here may be left out of consideration (see Feist s.v.), but it is in fact difficult to separate OIcel. *slāpr* 'sluggish person', OHG *slaf*

'weak' etc. and OCS slabo, Lith. slãbnas 'idem' from $\lambda \alpha \pi \alpha \rho \delta \varsigma$ 'idem'. An interchange p/b occurs more often in these expressive words. The p is perhaps also found in Lith. silpnas. Serb. slabina is indeed a striking parallel of $\lambda \alpha \pi \alpha \rho \eta$. The lengthening in Homer before $\lambda \alpha \pi \alpha \rho \eta$ (p. 80f) will therefore go back to sl-. A parallel is $\lambda \alpha \gamma \alpha \rho \delta \varsigma$ with g, N. slakr 'weak' etc. There is no reason to assume a laryngeal. It is therefore further irrelevant here. It may incidentally be wondered whether the group is in fact of IE origin.

For ἀπο̄ρέρση see p. 81. The comparison of ἀείρω with Lith. sveriù 'to lift, weigh', svarùs, OIcel. svārr, OHG swāri 'heavy' is worthy of consideration.

In the second group the words with δ- should be separated from those with d-. The interpretation of ἀλίνειν (·ἀλείφειν Hsch.) presents difficulties. Skt. *lināti* may be an analogic form, *līyate* 'sich schmiegen an, sich andrücken, stecken bleiben, verschwinden', has nothing to do with ἀλίνειν. It also seems clear that λίναμαι λιάζομαι and ἐλῖνύω cannot be placed in this category either formally or semantically. Nor are there sufficient reasons for connecting λ εῖμαξ 'snail', Russ. *slimák* '*idem*' with ἀλίνειν.

For ἀλείφω: λιπαρός see p. 40.

Λίγδην 'grazing' etc. is put beside OIr. fo-sligim 'to smear', OHG slīhhan, 'schleichen (gleitend gehen)', OIcel. slīkr 'slippery'. The sl- could explain P 599 ἐπῖλίγδην (further in Homer only λίγδην χ 278 at the beginning of the verse). And yet this connection is semantically weak. It cannot be denied that this stem *sl(e)ig- displays semantic similarity with both ἀλίνειν and ὀλισθεῖν etc. Nevertheless it seems dangerous to me to connect OIr. fo-sligim 'to smear' with ἀλίνειν. One could equally well envisage ἀλείφω or λιπαρός. In view of the uncertainty that prevails here— and will continue— it seems proper to draw no further conclusions. In cases like this it is best to conclude original identity only when there is precise agreement in form and meaning.

Feist hesitates to connect Goth. slaihts 'smooth' with OIcel. slikr etc., on account of *slek-: *slig-. Semantically speaking, connection of the latter with $\partial \lambda i \gamma o \zeta$ is not probable, in view of the meaning of $\lambda o i \gamma o \zeta$ ('ruin').

However, more clear is ολισθεῖν, if it is from *ολιθ-, beside OE slīdan, Lith. slýsti (pret. slýdau), OCS slědo 'track'.

Just as convincing is ὀλιβρόν ('ὀλισθηρόν, λεῖον, ἐπισφαλές Hsch.), OE slipor, OHG sleffar 'slippery, smooth' (N. slipra, OHG slīfan 'to slide'), for which PIE *slibro- is assumed.

Group 5 is highly problematic. The forms ἀμέργω etc. have nothing in common semantically with the others. Whether σμερδνός is cognate with OHG smerzan etc. may be left out of consideration (in my opinion the original meaning of σμερδαλέος is not sufficiently known); semantically ('terrible to look upon, — to hear, fearful': 'pain') the etymology is not imperative. There is no basis for putting σμερδνός or μαραίνω μάρναμαι on a par with ἀμέρδω 'to rob'. In that case all that remains is ἀμέρδω: κωλύει, βλάπτει and μερθεῖσα στερηθεῖσα, ἀμερθεῖσα Hsch. But

see p. 73 on the value of glosses in this matter. The word has no convincing etymology.

The group under 1 is the most awkward one. In my opinion ἀβληχρός, ἀβλαδέως ('ἡδέως Hsch., further unknown) and ἀμβλίσκω ('to cause to miscarry'!) are too unclear for any argumentation whatsoever. For the remaining words see s. vv. (pp. 42).

For μέλδομαι '(to cause to) melt' the connection with OE meltan 'to dissolve, melt' is obvious. In addition there is a form with s in OIcel. smelta etc. However, what is of most importance here is the form ἀμέλδειν τήκειν Hsch. not given by Nikitina. Here there is a clear case of s movable beside prothetic vowel in Greek.

b. The Material

To the cases mentioned so far we may perhaps add ἀλείτης, which was connected by De Saussure (*Mémoire*, p. 75) with Goth. sleiþa 'damage', OS slīdi 'bringing ruin, bad'. As s-less form of this Grienbergen, Unters., p. 192 f., sees OIcel. leidr, OHG leid 'übel, verhasst, feindlich', which he also compares with ἀλείτης (see Frisk). We find the same phenomenon in ἀπειλή as against Latv. pelt, Goth. spill and in ἀέλιοι beside OIcel. svilar. Further one may also envisage ἕλη, Dor. βέλα (Fέλα) 'heat of the sun', which probably belongs with OE swelan, Lith. svilti 'to singe' (with OE sweltan, but not ἐέλδομαι, see Feist s.v. swiltan). Έλη may therefore come from *sμelā, but it is not certain to me that εΐλη has prothetic vowel, as Frisk claims.

We therefore have the following cases:

ἀμέλδειν, μέλδομαι, OE meltan, OIcel. smelta. ὀλισθεῖν, OE slīdan, Lith. slýsti, OCS slědω. ὀλιβρόν, OE slipor. ἀείρω, Lith. sveriù svarùs, OIcel. svārr, OHG swāri. ἀπειλή, Latv. pelt, Goth. spill, Arm. ara-spel. ἀέλιοι, εἰλίονες, OIcel. svilar. ἀλείτης, OIcel. leidr, Goth. sleiþa. ? εἴλη, ἕλη, ϝέλα, Lith. svìlti, OE swelan. ? ἀμέρδω: μέρδει.

c. Interpretation

The interpretation of these facts — assuming that the connections established are correct — presents difficulties. It seems to me that the material given here is too slight for the phenomenon to be regarded as established.

On the other hand it is also hardly feasible to dismiss these cases as "Entgleisungen" — whatever reality may be indicated by the term. Confusion in the sense of Hammerich (p. 81 f.) cannot explain why δλιβρόν and δλισθεῖν have an δ- and ἀμέλδειν has an ά-. This applies a fortiori if ἀλείτης, ἀείρω and ἀπειλή are comparable. For as the vowel

would not in that case go back to a laryngeal, one would expect that the timbre of the vowel was determined by the (following) vocalism or consonantism.

It therefore seems probable that these forms go back to one basic form (apart from the s movable). Austin (Lg. 17 (1941)) gives for ὀλιβρόν a PIE basic form *Ab(s)leib. As it is not certain that *slib- has an s movable, it is better to transfer this interpretation to ἀμέλδειν. This would therefore give *Ab(s)meld-, or in the view followed here * $\hbar(s)meld$ -. Apart from the fact that one would expect from * $\hbar smeld$ - in Aeolic * $\mathring{\alpha}$ μμελδ-, elsewhere * $\mathring{\eta}$ μελδ- (a type of which there is no trace), this presumes that the second (in Austin's interpretation even the third) phoneme of the word could or could not be present, which is particularly improbable. Such an interchange has not a single parallel in IE. In this way the problem of the s movable 35 becomes even more complicated. For it is not plausible that all cases of s movable go back to $\hbar(s)$ -, so that in any case a distinction would have to be made between two types.

If one is not prepared to assume that the laryngeals could act in a similar fashion to s movable, it must be assumed that the laryngeal in these words formed part of the stem and that the s movable here acts in the same way as elsewhere. This therefore gives in the case stated *sħmeld-. It might be conceivable that in this group the laryngeal was vocalized, but there is no trace of the forms to be expected in that case (although ἁμαρτάνω might be explained in that way, see p. 109). The group μέλδομαι, smelta: ἀμέλδειν, meltan can be explained only by starting from *sħ2meld-: *ħ2meldand assuming at the same time that in all languages the consonantal laryngeal has disappeared between s and the sonant. Compare for this $i\rho\delta\varsigma < *is\hbar_1 r\delta s$ (p. 184), where the laryngeal (after s) was not vocalized either. Juret (Dict. etym. grec et lat., p. 85) assumed a similar form as the basis of άμαρτάνω, viz. *sħ2mert-. Pace Polomé (Evidence, p. 22 f., with n. 92), such a form does not seem inconceivable to me. The structure is no stranger than that of the stem of στρέφω (*strebh-) οr στρεύγομαι (*streug-), where one therefore finds sTRe(R)T-, while here sHRe(R)T- is presumed (with s movable). In Hittite, where the group sC- acquired a prothetic vowel i(p. 18 n. 2) and the laryngeal after s was preserved as h, one can point to iš-hi-ja-an-zi [ish(i)janzi], Skt. syáti 'to bind' from the root sā-, PIE seħ-, which forms therefore go back to *sħieti; further iš-ha-ma-in 'song' (acc.), iš-ha-mi-ja-an-zi, Skt. sāman-'song'. Here there is therefore no s movable.

After the above had been written I found a form as meant here in Hitt. $i\bar{s}hunau$, which is interpreted by Laroche, OLZ 1962, 30 f. (cf. BSL 57,28; Friedrich, $Erg.\ h.$ 3, 1966), as 'Sehne (im Körper), Bogensehne' and is identified with Skt. $sn\bar{a}van$ -, Av. $sn\bar{a}var$ -, Gr. $v\epsilon\tilde{v}\rho v$. A (Greek or Armenian) form with prothetic vowel is not known here, but an s-less one is, if OHG $n\bar{a}$ -en belongs in this group. For the s- in the Greek forms ($s\hbar n$ ->sn->v-; $\hbar n$ - ought to have given prothetic vowel) see Frisk s.v. 2. $v\epsilon\tilde{w}$. The forms quoted there point in the first instance to $*(s)n\bar{e}$ -, so that a root ending in laryngeal is expected. However, the reconstruction $*(s)\hbar ne\hbar_1$ - shows that this \hbar_1 is an

The most recent publication on this is by Edgerton, L_g 34 (1958), 445-51; like Brugmann: 'satz-phonetisch'.

enlargement³⁶ (after which a second one is possible, *sħneħ₁i- in Skt. snāy-ati; cf. also snāy-u- 'Band, Sehne'), so that now allowance may be made for other enlargements than \hbar_1 (see for this for instance s.v. ănµı on p. 57), e.g. *(s)ħner- (see WH s.v. nervus; in addition *(s)ħner-u-?) and *(s)ħneu-, to which perhaps Hittite points. (The old interpretation gave for veopov etc. a basic form *snē-u(e)r/n-; the u may, however, belong to the stem and also a form without laryngeal is possible.) However, the most important thing here is that, if Laroche's interpretation of the Hittite word is correct, the group *sħn-, in which s is an s movable, has been demonstrated for the basic language as well as a Greek development sħn- > sn- > v-. Perhaps Hittite will later provide further confirmation of s movable before laryngeal.

The group ἀστήρ, Arm. astl, Skt. instr. pl. str-bhih, nom. pl. tār-aḥ, is, however, even more difficult. The first two forms point to $\hbar st$ -, but Indian indicates an s movable, which must originally have been the first phoneme, and so points rather to $s\hbar t$ -. The only possibility seems to be a form $*(s)\hbar t(e)r$ -, of which $s\hbar t$ - then became $\hbar st$ - by metathesis. This metathesis will have taken place in the basic language, since both Greek and Armenian point to $\hbar st$ -. That metathesis took place here and not with for instance $s\hbar m$ - (μέλδομαι etc.) will then have to be ascribed to the nature of the t (occlusive in general?). (According to this analysis the root of this word would therefore be $*\hbar zet$ -.)

6. THE TIMBRE OF THE ARMENIAN PROTHETIC VOWEL

It is important to see what timbre the prothetic vowel has in Armenian. Unfortunately a clear conclusion cannot be given here. The material now follows, arranged in accordance with the Greek prothetic vowel. See Add.

α	? ἀλώπηξ	ałuēs	O	ὀλίγος	ałk°at
	ἀνήρ	ayr		ὄνειδος	anicanem
	ἀστήρ	astł		ὄνειρος	anurj
3	ἔρεβος	erek		ὄνυξ	ełungn
	ἐρεύγομαι	orcam		ὀφέλλω	avelum
	ἐννέα	inn		ὀφέλλω	y-avelum
	? ἔδοντες	atamn			-

The cases which have had \hbar_3 all show a, with the exception of *elungn*, of which the interpretation is, however, uncertain; perhaps it would therefore be as well to interpret this word differently.

The prothetic vowel that goes back to h_2 also seems to be a. Here, however,

³⁶ However, the situation is complicated still further by forms like ON *sin*, OHG *senawa 'sinew'*. De Vries (s.v. *sin*) derives these words from **seh-i-* 'to tie' (Skt. *syáti*, etc.). In that case the *s* would belong to the root. The details are therefore still unclear here.

άλώπηξ and ἀστήρ present difficulties, so that the question is whether these words are reliable. However, another representation for \hbar_2 than a is not to be expected.

The picture that the forms with \hbar_1 display is very erratic. Both *erek* and *inn* seem to point to e. The strangest case is *orcam*, which seems to have developed from *o-ruc-am. As a prothetic vowel e is found nowhere else, it may be asked whether we are in fact concerned here with a phonetic development of the laryngeal. (We might envisage a preverb, cf. Lat. \bar{e} - $r\bar{u}gio$, NPers. \bar{a} - $r\bar{o}\gamma$.) With the other forms there is no evidence of influence of the stem vocalism. Of course it might be assumed that this was only the case with the vowel that developed from \hbar_1 , but this supposition cannot be verified. *Atamn*, too, could be explained in this way if the original form had \hbar_1 . Here, however, it is still possible that the basic form had \hbar_3 .

It goes without saying that the interpretation given here, \hbar_2 and $\hbar_3 > a$, $\hbar_1 > e$, is far from certain, in view of the scarcity of material. Nor is the reason for this development clear. If \hbar_1 became e, one would have expected $\hbar_3 > o$. It is true that PIE o sometimes became a, of which the exact conditions are not known, but this will not have been the case here, since before nasal u < o was expected (Esquisse², p. 41); the only possibility I see is that the $o < \hbar_3$ had changed into a before on became un.

A study of the — more recent — Armenian prothesis before r might perhaps be illuminating here. The cases stated in $Esquisse^2$ are the following:

er	erēç	Lat. <i>prīscus</i>	ar	aru	*sru-
	erastank	πρωκτός		arev	*reu-
	erek ^c	Lat, tres		artasuk	*draku-
	erkan	Skt. grávā	el	elbayr	*bhrātér
	erku	Lat. duo	al	ałbiwr	*bhréur
	erknčim	*duei-			~*
	erkar	*δεᾶοός			

Here too it is not clear why now e, then a appears. The last two forms show that no assimilation to the stem vowel took place.

7. SUPPORT FOR THE EXPLANATION BY MEANS OF THE LARYNGEAL THEORY

Not only is it probable on the strength of the nature of the prothetic vowel in Greek itself and the correspondence with Armenian that this prothetic vowel originated from a laryngeal; this idea is confirmed otherwise, too, namely by five phenomena:

- (1) by ablaut relations;
- (2) by Hittite forms;
- (3) by lengthening phenomena in Vedic;
- (4) by the negatives with $\nu\eta$ -, $\nu\bar{\alpha}$ -, $\nu\omega$ in Greek;
- (5) by Attic reduplication (with corresponding reduplication in Vedic).

The last two points demand a fairly detailed discussion and will be dealt with in two separate chapters. The first three are discussed here.

a. Ablaut

The ablaut forms of several words with prothetic vowel make the assumption of a laryngeal highly probable.

In this way ἀ η δ ώ ν (* $\hbar_2 u\bar{e}d$ -; Skt. $v\acute{a}dati$): αὐδή may be interpreted as * $\hbar_2 u\bar{e}d$ -: * $\hbar_2 eud$ -. The zero grade * $\hbar_2 ud$ - is perhaps found in Greek in ὑδέω (Skt. ud-), although this form does not occur until late (Call.). For ἀείδω see p. 56 f.

In exactly the same way ἀλέξω (Skt. rάkşati): OE ealgian < *algōjan may be explained, $*\hbar_2 lek$ -: $*\hbar_2 elk$ -. Of Gr. ἀλκή, which goes back to a root noun, the stem ἀλκ- will probably go back to the zero grade $*\hbar_2 lk$ - of the oblique cases (with a nom. $*\hbar_2 l\acute{e}k$ -s or $*\hbar_2 l\acute{o}k$ -s?). For the development $*\hbar_2 lk$ - > ἀλκ- cf. p. 34 s.v. ἀργός.

In the same way ἀλέγω ἄλγος must go back to $*\hbar_2 leg$ -: $*\hbar_2(e)lg$ -; see p. 39 f. Άρεπυια ἄρπυια ($*\hbar_2 rep$ -: $*\hbar_2 rep$ -, p. 35) and ὀρόγυια ὄργυια ($*\hbar_3 ro\hat{g}$ -: $*\hbar_3 r\hat{g}$ -, p. 37) also display the same ablaut.

* $\dot{\alpha}\pi \epsilon \lambda \circ \varsigma$: OIcel. afl also fits into this scheme as * $\hbar_2 pel$ -: * $\hbar_2 epl$ -. However, here there is less certainty. Afl may also go back to *opl- and is thus connected with Lat. ops, which, however, is much less convincing from the semantic point of view (an opinion also shared by De Vries s.v.). The form $-\eta\pi\epsilon\lambda$ - could also contain * $\dot{\epsilon}\pi\epsilon\lambda$ -. However, the combination of these words seems reliable.

The situation is somewhat different with respect to ἄεσα (Skt. $v\'{a}sati$): αὐλή, ἰαύω. For the semantic side see Kuiper, Nasalpr., p. 63 n. 2. Here too the a vocalism of the root au- points to * $\hbar_2 eu$ -, as does the reduplication (see p.129). With the suffix es one therefore gets * $\hbar_2 u$ -es-. This situation is exactly the same as that with ago: gero, * $\hbar_2 e\^{g}$ -: * $\hbar_2 e\^{g}$ -es-, where Greek, however, has no representative of * $\hbar_2 e\^{g}$ es-.

However, this support in the ablaut is found only in connection with \hbar_2 (apart from a special case that will be mentioned below). To realize this it is necessary briefly to reproduce the view followed here with reference to the PIE root.

On this point one can speak of a German and a French school, of which Hirt (Ablaut) and Benveniste (Origines) are the clearest exponents. The latter enjoys considerable support because Benveniste took up the laryngeal theory after Kurylowicz' interpretation of the Hittite h (Symb. Rozw.; cf. Origines, p. 148 n. 1). On the other hand the German school leaves the laryngeal theory out of consideration on the authority of Brugmann and Hirt.

Since Benveniste in his Esquisse d'une théorie de la racine (Origines, pp. 47-73)

elaborated and systematized Meillet, 37 the two approaches have been sharply opposed to one another. This is the fault of Benveniste himself, since at the only place where he states an opinion on the relation of the view which he defends to that of Hirt he says (p. 152 n. 1): "le lecteur informé verra l'abîme qui sépare notre conception de celle que M. Hirt a soutenue dans son Ablaut (et qui est symbolisée par des restitutions comme «pelā»)". It is strange that Benveniste did not see that the two theories lie at different levels, so that they can very well be combined. When he reproduces the interchange ters/tres as ter-s: tr-es, that is no more than a structural analysis that is useful for practical application. But if one enquires about the *origin* of the two forms, one is obliged, having regard to the paradigmatic interchanges (one need only think of λείπειν: λιπεῖν, πατέρα: πατρός, cf. Introduction, p. 11), to assume that change of stress was the reason why these two forms came into being (i.e. for instance teres, with téres > ters as against terés > tres). The laryngeal theory can easily be incorporated in this: $pel\bar{a}$ then becomes $peleh_2$ with $p\acute{e}leh_2 > p\acute{e}lh_2$ and $pel\acute{e}h_2 > pl\acute{e}h_2$ $(>pl\bar{a})$, or, in the case of laryngeal at the beginning of the word, $\hbar_2 \acute{e}lek > \hbar_2 \acute{e}lk$: $\hbar_2 el\acute{e}k > \hbar_2 l\acute{e}k$. Benveniste is right to point out that forms of the teres type no longer occur anywhere, but of course that proves nothing with respect to an earlier stage of the proto-language. On the one hand, therefore, pelā (peleh2) has the advantage of collecting all forms of this stem in one formula, on the other hand the notation pelh₂/pleh₂ (pelə/plā) has the advantage of giving only forms of which direct representatives are apparent.

A difference, but not an essential or necessary one, between the two theories, which has led to many fictitious proofs in the field of laryngeal theory, consists in the fact that Benveniste assumes that the PIE root could only begin with consonant (Origines, p. 170f.; the same view is stated in Kuryłowicz, Eos). It is evident that this idea suggested itself because a laryngeal often proved to have stood before initial vowel. However, there is no proof that this was always the case. Nothing obliges us to posit this. Nor is there any indication that the root of εὔχομαι, Lat. voveo, PIE eu-g"h-/μ-eg"h-, contained a laryngeal. It was merely the desire to find the simplest possible formula that led to this theory. It should be stressed again here that no allowance need be made for this thesis, since it is unproven. It may never be used as an argument in solving problems of detail.

It seems out of the question to prove such a theory. One could only state that all verifiable cases which seem to begin with vowel originally had a laryngeal. However, the theory would have to be abandoned for good if the opposite could be demonstrated in a number of clear cases, which is probably easier.³⁸ Some points could be considered here.

³⁷ That these are in essence Meillet's ideas is already evident from his *Introduction*, 1903¹, pp. 145-50 (practically identical with 1934⁷, pp. 173-9). Although the *Origines* are dedicated to Meillet, one seeks in vain a reference on this point. (In general it is to be regretted that French authors list so little literature.)

³⁸ On the assumption that v - hV- became $\alpha - (h)V$ -, I believed that I had found an argument in the form αv - of the negative prefix v-. If there were no words that began with a vowel, the form αv -

In Greek an interchange ε -/ α - would be impossible if the word originally began with laryngeal. For, whatever ablaut form the root had, the Greek vowel would either always have been ε (in the case of \hbar_1) or always α (in the case of \hbar_2). Such an interchange may perhaps be found in $\varepsilon \rho_1$ -/ $\alpha \rho_1$ -, which must therefore be explained as *eri-/eri-. For both \hbar_1 eri- and \hbar_1 eri- would have given $\varepsilon \rho_1$ -, just as both \hbar_2 eri- and \hbar_2 eri- would have become $\alpha \rho_1$ -. (Thus the $\delta \rho_1$ assumed by Schmitt, Idg. Dichtersprache n. 220, is incorrect.) Further, when Cypriot $\varepsilon \rho_1$ beside $\varepsilon \rho_2$ 0 elsewhere is a reality, to which $\delta \rho_1$ 1 and $\delta \rho_2$ 2 elsewhere is a reality, to which $\delta \rho_1$ 2 and $\delta \rho_2$ 3 and $\delta \rho_3$ 4 correspond in Lithuanian, one must assume *er/or/r. More important seems to me $\delta \rho_1$ 4 poq $\delta \rho_2$ 4, which will go back to *ers-/rs- (perhaps from paradigmatic ablaut; cf. OP aršan-: Skt. rsa-bhá-).

A second consideration is that the sandhi shortenings still apparent in Vedic (cf. p. 145 f.) of forms ending in laryngeal would have been impossible if there had not then been words beginning with vowel. However, here one could assume that the laryngeal at the beginning of the word had disappeared earlier than that at the end.

If our interpretation of Skt. *inakṣati* and *anákti* (p. 236 f.) is correct, an argument is also found here: Lat. *unguo* points to *ong^u-, but Skt. *anákti* must go back to *eneg^u- without laryngeal, since * \hbar_e neg^u- would have become *inak-. The root *e/ong^u- cannot therefore have had a laryngeal.

For the possible argument in Lat. ursus see p. 133. See also p. 197 s.v. $v\eta\sigma\sigma\alpha$, where a form $*_en\hbar_2tis$ is reconstructed without initial laryngeal.

Another consideration against the theory that every PIE root began with consonant was given by Cowgill on p. 131 of the first edition of Evidence (1960). If es- 'to be' were to begin with laryngeal, one would expect in the zero grade * $\hbar_1 s$ -> Gr. $\delta \sigma$ -, which leaves unexplained the 3 pl. Dor. ἐντί and the part. Att. ὄντες. For Hom. ἔασι, Myc. eesi and non-Att. ἐόντες analogic extension of the stem *es- is easy to understand, but the absence of the 'prothetic vowel' cannot be explained by analogy. However, in Evidence 1964, pp. 167 ff., Cowgill states a different opinion. According to him, Dor. ἐντί was a contraction of *ehenti < *esenti. As regards Att. ὀντ-, the form could hardly be old on account of Myc. apeo(te) apeasa and might be a development of ἐοντ-, as for instance ὁρτή for ἑορτή, Schwyzer, p. 253 (cf. Lejeune, Traité, pp. 221 f., Buck, Gr. Diall., pp. 40 f.). However, Cowgill himself admits that no other cases of this development are known from Attic, while the dialects for which it is demonstrable have covt. That makes this attempt at explanation a very weak one. For the Hittite forms e-eš-zi a-ša-an-zi cf. edmi adanzi p. 55. However, Cowgill wrongly suggests (p. 169) that this case is decisive for the theory discussed here. Reference may be further made here to evvout (see p. 79), where there is no trace of

would after all have been unable to develop anywhere and therefore could not have been introduced analogically either. I thought that I had found such forms in $\dot{\alpha}\dot{\alpha}\alpha\tau\sigma_{\zeta}$ and $\ddot{\alpha}\alpha\pi\tau\sigma_{\zeta}$ (II.). But the idea is untenable, since sonant nasal before laryngeal does not become α : $\eta\hbar_2 > na\hbar_2 > v\bar{\alpha}$ before consonant (p. 205) and $\eta\hbar_2 > an(\hbar_2) > \alpha\nu$ before vowel (p. 221). Before laryngeal too, the form $\dot{\alpha}\nu$ - is therefore to be expected for the negative prefix. However, perhaps it can be used for other languages. In Latin one would also expect *anV- from η - \hbar V-; however, there is no trace of this. In Indian anfor $\eta\hbar$ V- is not probable $(in(\hbar)V$ - or $a(\hbar)V$ is more likely).

the 'prothetic vowel' to be expected if the root were * $\hbar \mu es$ -. Finally, ŏvoµ α may also be mentioned. If the interpretation given here (p. 229 f.) is correct, this word has a stem *en- \hbar_3 -/n- $e\hbar_3$ -.

If it is assumed that the PIE root could also begin with vowel, the ablaut forms $*en\hat{k}-:*ne\hat{k}$ - prove nothing for ἐνεγκεῖν, whether the interchange is formulated as $*en-\hat{k}-:*n-e\hat{k}$ - or as $*ene\hat{k}$ -. The same applies to ὄνυξ, *ongh-:*nogh-. However, it is obvious in cases where Greek points to *ένεκ-,*ονοχ- to posit \hbar_1 and \hbar_3 respectively, the more so as the timbre of the prothetic vowel corresponds to that of theme I (and *engh- does not seem to occur beside *ongh-). However, in the case of *ombh-:*nobh- no Greek form with prothetic vowel is known (see p. 44 s.v. ὀμφαλός). And so there is no need either to assume a laryngeal, supposing that a form *embh- was found beside *nebh-: the fictitious problem of νέφος, p. 74.

Completely unfounded, for instance, is Benveniste's * $\hbar_3 elk$ - (ὀλκ-): * $\hbar_3 lek$ -(ὀλέκω; *Origines*, p. 152), which is repeated ("His best examples") by Messing, *HSCP* 56/7 (1947) 193. I know of no Greek ὀλκ-. But more serious, perhaps, is the morphological impossibility: ὀλε- is a disyllabic root, PIE * $\hbar_3 el\hbar_1$ -; a PIE * $\hbar_3 el\hbar_1$ -k- is conceivable (the κ is rather a Greek present formant, Schwyzer, p. 702), but in that case the ὀ- could not be called a prothetic vowel; however, both * $\hbar_3 l$ - $e\hbar_1$ -k- and * $\hbar_3 l\hbar_1$ -k- gave * $\delta\lambda\eta\kappa$ - (for the second development see p. 95).

Returning to our starting-point, it must therefore be concluded that ablaut forms in themselves support the explanation of the Greek prothetic vowel from laryngeal only when these begin with a-; that PIE a- goes back to $\hbar_2 e$ - is discussed on p. 133 ff. Roots which begin with e or o have not necessarily had a laryngeal. However, a possible exception to this is formed by the roots of which the vocalic sonant in Greek has e- or o-vocalism. In the case of $\mathring{o}\rho\gamma\upsilon\iota\alpha$, for instance, there is reason to assume that $\mathring{o}\rho\gamma$ - is based on a zero grade (p. 37). However, the form * $r\hat{g}$ - would have given * $\mathring{a}\rho\gamma$ -. If one is therefore concerned here with a purely phonetic development (and the o-vocalism must not be ascribed to the effect of analogy), one must posit here a form * $\hbar_3 r\hat{g}$ -, assuming that the laryngeal determined the colour of the vowel. With \hbar_1 one perhaps finds this phenomenon in $\mathring{e}\nu_F\alpha$ - $<*\hbar_1 \eta u$ -, p. 45 f. s.v. $\mathring{e}\nu\nu\acute{e}\alpha$. (Here again the cases with \hbar_2 are of course meaningless.)

b. Support in Hittite

In Hittite a direct representative of the consonantal laryngeal is found in some cases, represented in writing by a separate sign, transcribed h. One may therefore expect here a confirmation of the laryngeal which is assumed on the strength of the prothetic vowel in Greek. Now in Hittite one finds this h at the beginning of the word before consonant only before h; only $ha-lu-ga-a\check{s}$ 'message' would have h before h if it were spoken as [hlugas]. In about fifteen cases Greek has prothetic vowel before h. If these facts are taken into consideration, it need not be surprising that Hittite only has two words which are cognate with these Greek words, both with $h_2\mu$. These are:

ἄεσα — Hitt. hu-i-iš-zi [huiszi] 'he lives'; cf. Skt. vásati 'to stay', Goth. wisan 'to be', Arm. gom 'I am';

ἄημι — Hitt. hu-u-ua-an-te-eš [huantes] 'wind'; Lat. ventus.

The suggested connection of ἄεθλος with huitiazi is incorrect, see p. 56.

There is, however, a word that must have had \hbar_1 , but of which the Hittite cognate has no \hbar , $\text{è}\text{E}\rho\sigma\eta - \mu arša$, Laroche BSL 58,62, Friedrich Erg. \hbar . 3, 36. If this interpretation is correct and the word is not a loan word, as Laroche expressly states, then the conclusion seems to have to be that \hbar_1 at the beginning of the word before consonant in Hittite disappeared. That would be confirmed by the connection between $\text{è}\lambda\text{e}\gamma\chi\omega - linkzi$ and $\text{e}\nu\text{e}\nu\gamma\kappa\text{e}\nu - ninink$, nakki. However, it must be borne in mind here that there is also no certain case known of \hbar_2 before $r \ l \ m$ n in Hittite either. Nor is there a criterion for \hbar_3 : $\text{o}\nu\omega$ (Hitt. la-a-ma-an) has no prothetic vowel, see p. 47.

In any case, Hittite words that are cognate with Greek ones that have no prothetic vowel also have no h, e.g. \dot{u} -ek-zi [u-ekzi] — \dot{v} -εκών, \dot{u} -e-e \dot{v} -tin [u-es-] — \dot{v} -νυμι, \dot{u} -it-ta-an (u-et-) — \dot{v} -τος. In the case of ne-pi-i \dot{v} [nepis] 'cloud' — νέφος one does not find a h-either.

Although there are thus still a variety of questions of detail, above all on account of the paucity of Hittite material, in my opinion the importance of the forms *huiszi* and *huantes* cannot be denied.

c. Lengthening in Vedic

In Vedic one sometimes finds lengthening of the last vowel of the first member of compounds. As this phenomenon partly occurs before certain roots, it is obvious to assume that this is in part a phonetic phenomenon. Kuryłowicz, Symb. Rozw. 104, in detail in Roczn. Or. 210-8, has suggested that this lengthening was caused by a laryngeal that originally preceded the second part of the compound. Per Slomann, in Pedersen, Cinq. décl., p. 33 n. 1, arrived at the same idea independently of and just before Kuryłowicz. A number of these stems proved to correspond to words which in Greek have prothetic vowel. A clear case is the lengthening before nar-, which is cognate with ἀνήρ; one finds in the Rigveda sūnára-, sūnýtā-, abhīnara-, viśvánara-, sikṣānará-.

This forms a neat confirmation of the idea that the Greek prothetic vowel developed from a laryngeal. And yet caution is called for here, for this lengthening also occurs in words, in a large majority in fact, for which laryngeal as first phoneme is improbable, or at least not demonstrable. Nor can it be denied that here rhythmic lengthening occurred, so that great care should be taken with the interpretation of this material. A careful study of Indian material is necessary here, but this is beyond the scope of the present work. I am basing myself here on the above-mentioned articles by Kuryłowicz and shall merely point to the possibility of finding in these lengthenings a confirmation of the laryngeal. This lengthening may also occur with the augment. One finds for instance:

```
ἀνήρ nar- sūnára- etc., supra.

ἐνεγκεῖν naś- parīṇáśe; ānaţ (augm.).

ἐλεύθερος rudh-/ruh- upārúh-, anūrúdh-, vīrudh- etc.

ἐέρση νις- prā-νις-
```

One may be tempted to find this lengthening in Greek as well. And yet the explanation as compositional lengthening is there always an obvious one. One is therefore solely entitled to assume the effect of a laryngeal here if the usual explanation cannot offer a solution. (Another point is, of course, to what extent compositional lengthening as such originates in lengthening after the disappearance of a laryngeal.) The explanation of Ruijgh, $L'\acute{e}l\acute{e}m.$ ach., p. 69, of $i\pi\pi\bar{a}\mu o\lambda\gamma\acute{o}\varsigma$ as $*ek^uo-\hbar_2molg\acute{o}s$ is incorrect, since $o\hbar_2$ became \bar{o} and not \bar{a} (see p. 166 f.).

8. NATURE OF THE LARYNGEAL

Those who are of the opinion that the laryngeal could function solely as a consonant and could not be vocalized are obliged to explain the (apparently) vocalic representation of the laryngeal with the aid of reduced vowels.

Where the prothetic vowel is short, the reduced vowel must have stood behind the laryngeal, since $_e\hbar$ would have developed into $a\hbar$ and thence before consonant into \bar{a} (in the case of \hbar_2). This is consequently out of the question.

Austin (see p. 78) assumes, like Sturtevant and Kuryłowicz (who notes g_e) that the prothetic vowel developed from a group of laryngeal + reduced vowel, i.e. h_e (in his notation A_b). It is evident that this is equally impossible. For if PIE had a vowel here, one would expect in all IE languages a vowel at this place, since one cannot assume that this reduced vowel would have disappeared without apparent cause (such as the effect of stress).

It has been stated above that Austin explains the opposition ἐέρση: ἔρση by *Abuers-: *Auers-. In this way it might be assumed that the forms in the other languages go back to the variant without reduced vowel. However, if one is prepared to assume this ablaut, it remains improbable that in Greek (and Armenian) the one ablaut phase was carried through, and in the other languages always the other.

The same objection as the first one to Austin's view also applies to a vocalic laryngeal (h), for this is by definition reproduced by a vowel, so that in this case too corresponding vowels might be expected in the other languages.

Another consideration is that the comparison ters-: $tres-=\hbar_2 eug-:\hbar_2 \mu eg-$ renders it probable that in this position solely a consonantal laryngeal could occur. For the possibility of the development of anaptyctic vowels see the criticism of Adrados on p. 29 f. (The latter idea may already be found in Kuryłowicz, *Prace Fil.* 233, which, however, he abandoned in his *Etudes*, p. 28.)

A further argument seems to me the fact that Hitt. hwis-, hwant- (hu-i-is-zi, hu-(u-)wa-an-te-es) does not indicate a reduced vowel.

If our interpretation, according to which μ έλδο μ αι and νευρά began respectively with $s\hbar m$ -, $s\hbar n$ -, (p. 85 ff.) is right, the laryngeal that disappeared here must have been a consonant; a vowel, either a vocalic laryngeal or a reduced vowel, could not have disappeared.

A final argument is the following one. All forms of $\mathring{o}v\acute{v}\eta\mu\iota$ (Frisk s.v.) seem to go back to a stem $\mathring{o}v\eta$ -. The medial agrist seems to be one of the oldest forms of this stem in Greek. Chantraine, Gr. Hom., p. 382, cannot explain the η ($<\bar{\alpha}$) and describes the \mathring{o} - as "peut-être prothétique"; (the word has no clear cognates in the other languages). The difficulties disappear if $\beta\lambda\eta\tau$ 0, $\pi\lambda\eta\tau$ 0 are compared. These agrists have the expected zero grade of the stem, CRH-. If it is assumed that $\mathring{o}v\eta$ - goes back to * $\hbar_3ne\hbar_2$ - and that the medial agrist had the zero grade here as well, the stem had the form * $\hbar_3\eta\hbar_2$ -; this form became $\mathring{o}v\bar{\alpha}$ - phonetically. This development is understandable: the development from $\eta\hbar_2$ to $v\bar{\alpha}$ is normal (see p. 205); afterwards the first laryngeal was vocalized. If the n was preceded by a vocalic element, one would expect in Greek $Vn\hbar_2$ -to $>\mathring{o}v\tilde{\alpha}\tau$ 0 (Chantraine's problem). To explain * $\hbar_3\eta\hbar_2$ -to $>\mathring{o}v\eta\tau$ 0 one must therefore assume a consonantal \hbar_3 , as the comparison with $\beta\lambda\eta\tau$ 0 confirms. This \hbar_3 was therefore still a consonant when $\eta\hbar_2$ became $na\hbar_2$ ($>v\bar{\alpha}$).

The conclusion is therefore that one has here a laryngeal that was consonantal in PIE, which was secondarily vocalized in Greek and Armenian.

Kuryłowicz' idea, Eos 30, 206-11, that the development from laryngeal to vowel was phonetic only after words ending in a consonant, may be correct, but in that case this sandhi variant has evidently been generalized everywhere. For otherwise the agreement between Greek and Armenian cannot be explained. And yet the idea does not seem probable, since in that case this sandhi phenomenon would have been expected in Indian as well. For here there are still traces of sandhi apparent in which the laryngeal was concerned, and not in Greek.

9. Laryngeal before *i*

It is striking that Greek has prothetic vowel before $\rho \lambda \mu \nu F$, but not before PIE \underline{i} . One may think here of α iová ω , α i ω p α and α ió λ o ζ . None of these words has a reliable etymology. However, the interchange α ió λ o ζ : α i ε λ -oupo ζ is reminiscent of PIE ablaut (Frisk's "vocalic harmony" — assimilation? — is not convincing). There is not the slightest objection to a structure * $\hbar_2\underline{i}el$ -. However, it might be expected that the \underline{i} would have disappeared, but there are exceptions to this rule (Lejeune, Traité, p. 145 f., where the adjectives ending in - α io ζ may also be mentioned). As long as no cognates are known, this naturally remains very uncertain. (The form * α i ε ptin α ptotov and α pt, having regard to the cognate forms, e.g. Av. ayara, must go back to full grade * $\hbar_2e\underline{i}$ -.)

It is of course conceivable that the group $\hbar \underline{i}$ did not occur in the basic language, but it is also possible that $\hbar \underline{i}$ developed in another way than $\hbar \underline{u}$ etc. in Greek. The

opposition $\hbar \underline{i}$: \underline{i} - thus to be assumed has been connected with the fact that Greek answers in two ways to the forms in the other languages that seem to go back to \underline{i} -.

This double representation of i-, Skt. $y\dot{a}h$ — $\delta\varsigma$: Av. $y\bar{a}sta$ - — $\zeta\omega\sigma\tau\dot{o}\varsigma$, has long attracted attention. Both developments are phonetically easy to explain and have parallels in other languages, but the fact that they exist side by side — without interchange with the same stem — calls for an explanation. Cf. Lejeune, $Trait\dot{e}$, p. 143 f. Attempts to attach the developments to certain conditions have not succeeded so far; discussion in Lehmann, PIEP, p. 74 f.

Of those who have sought a connection with the other languages, G. Schulze, Über das Verhältnis des Z zu den entsprechenden Lauten der verwandten Sprachen (Göttingen, 1867), already pointed to:

 Skt. yastá ζεστός
 : Skt. iṣṭá ἄζεται

 Alem. jesan
 ζέω
 : Alem. enēr 'ille'
 ὅς

 OHG joch
 ζυγόν
 : Alem. āmar 'pain, sorrow'
 ἤμερος

Cowgill (p. 161) casts doubt on the last two etymologies. He further points out that $\mbox{\'e} p\alpha$ is cognate with Alem. $j\mbox{\'e} r$, so that there is no correlation Gr. ζ - Germ. j- as against Gr. $^{\circ}$ — Germ. zero, as meant by Schulze (and Lehmann? Cf. Brugmann, $Grundr.^2$ 1, p. 282). For the second argument see below.

After this Sapir, Lg. 14 (1938) 248-78, tried to give a solution with the aid of the laryngeal theory. He supposed that the voiceless laryngeal +i resulted in aspiration; on the other hand a i- alone became ζ -. He believed that an argument could be found in $\delta \zeta$, Skt. $y\dot{a}h$, of which the stem io- is claimed to be an ablaut form of io- in Skt. io- io- in Skt. io- io- in Skt. io- io-

I do not understand the apparent simplicity of Cowgill's reasoning (p. 163) that "plain" $\underline{i} > \zeta$ - is "perfectly acceptable, so that there is nothing here that laryngeals need to be imported to explain". This fails to appreciate the problem of the double representation of \underline{i} - in Greek, or, viewed from PIE, does not answer the question of how \underline{i} -, $\hbar_1\underline{i}$ -, $\hbar_2\underline{i}$ -, $\hbar_3\underline{i}$ - developed in Greek.

Hammerich, $Lar.\ b.\ Son.$, p. 12-5, assumed, on the strength of the fact that ζ developed from $d_{\dot{i}}\ g_{\dot{i}}\ g^{\mu}\dot{i}$, that the ζ which seems to go back to PIE \dot{i} - in fact also developed from a cluster with \dot{i} , the first element of which could be a laryngeal. However, he did not give any material by way of proof. Lehmann, PIEP, pp. 74-9, attempted to do so, concluding from Hammerich's consideration that only voiced laryngeal, that is \hbar_3 (in his notation γ), followed by \dot{i} -, became ζ -. His argument that ζ - in Homer always makes position except in a number of proper names (which begin iambically, as Hoenigswald, Lg. 30 (1954) 468-74, remarks) seems to me not to prove

³⁹ In *Evidence*, p. 218, Lehmann repeats these facts without commenting on Cowgill's criticism (which was previously published in *Evidence*, 1960, p. 121).

that ζ - in all cases must have developed from a cluster. The development into ζ was already completed in Mycenaean: zeukeusi zesomeno (ζ é ω).

In addition to this the question therefore remains of what the development of $\hbar_1 i - \hbar_2 i$ was. 'Youivn might be a case of this development; before the Vedic root yudh- 'to fight' lengthening occurs ($v_1 \circ \bar{a}$, amitrā-yudh-), which might point to laryngeal, but is not in itself sufficient confirmation.

However, the material with which Lehmann seeks to support the hypothesis is not strong.

 $\zeta \omega \sigma \tau \delta \varsigma$, Lith. júostas, Av. yāsta-. Sturtevant, Indo-Hittite Laryngeals, p. 51, tries to connect this with Hitt. iš-ha-a-i [ishai] 'to bind', which in view of Luw. hi-iš-hi-ja-an-ti would be based on a stem *ħiħs-. In both Anatolian languages metathesis of ħs- would in that case have occurred, and in Hittite the first ħ would moreover have disappeared (by dissimilation?). The form *ħioħs- (*ħaieħas-?) would have given $\zeta \omega \sigma$ -. (For the structure of this stem one could compare *ħaueg-s-, Gr. ἀγεξ-.) Cowgill (p. 163) maintains the connection of the Anatolian words with Skt. syáti 'to bind', with hi- as reduplication of the tisthati type. This therefore implies a root *seħ-. In my opinion Sturtevant's reconstruction is too unreliable to qualify as an argument here.

For $\zeta v \gamma \acute{o} v$ Ved. $\bar{a}yuk$ - (with long augment) and $abh\bar{i}yuj$ - could point to laryngeal. Cowgill (loc. cit.) doubts the value of these forms. The opinion is that Hitt. $\underline{i}ugan$ refutes the reconstruction of a form * $\hbar \underline{i}ug$ -. Lehmann regards the word as a borrowing from an Indo-Iranian language, just as Hittite has borrowed various terms in the field of the training of horses from this source. This supposition may be correct, but there is no compelling argument in favour of it. However, it is not certain that PIE $\hbar \underline{i}ug$ - would have become in Hittite * $\hbar \underline{i}ug$ - (or * $a\underline{i}ug$ -?), the more so since an anlaut $\hbar \underline{i}$ - does not occur in that language; compare further $\underline{u}ar\check{s}a$ -, p. 92f. Here too in my opinion compelling proof has therefore not been supplied.

For ζειαί, Lith. javaī (pl.), Av. yava-, Ved. sūyáva- may point to laryngeal. (Lehmann's connection with ἤια has been adequately refuted by Cowgill, p. 165.)

ζύμη. Lehmann's connection with ζεύγνυμι ζυγόν is of course completely untenable from the semantic point of view.

 $\zeta \in \omega$. Cowgill, p. 165, has demonstrated with sufficient clarity that Skt. yastá(as against iṣtá-) is no argument for laryngeal at the beginning of the word.

The best case is $Z \notin \varphi \cup \rho \circ \varsigma$, to which Ambrosini, Ann. di Pisa 25 (1956) 142-7, has drawn attention. Hirt connects Gr. oʻ\ta \phi_0, Skt. y\delta bhati 'futuere', as *oiebh-. It is therefore obvious to assume *\hat{h}_3 eibh-|\hat{h}_3 iebh-\ here. But if oʻ\ta \phi o goes back to an athematic present that may have had o-vocalism, it is not necessary to assume a laryngeal (*eibh-|oibh-: iebh|iobh-); or else it need not be \hbar_3 . However, the Sogdian form "y'npt 'futuit' points to a nasal present, for which one is prepared to accept *\hat{h}i-n-\delta bh-mi. According to the theory under discussion here, a possible *\hat{h}_3 iebh-would have become $\zeta \in \varphi$ -, which is said to be found in $Z \in \varphi \cup \varphi \subset \varphi$ (according to Uhlenbeck, Etym. Wb., p. 235). For according to Greek popular belief this wind was

capable of fertilizing women. The difficulty is of course that the meaning of Ζέφυρος is not known, which is why Cowgill rightly remains sceptical.

In other words, there is not a single case that demonstrates $\hbar_3 i > \zeta$ - with reasonable certainty. In this way the theory does not find enough support from the facts, which, however, having regard to the small number of words with ζ - having a reliable etymology and the special forms which are required to demonstrate \hbar_3 , is not surprising. Compare the small number of words for which ablaut forms confirm the explanation of the prothetic vowel from laryngeal (p. 89 ff.).

Reference may be made here to the recent theory of Ruijgh (Het Myceense Dialect, Leyden, 1966, pp. 16 ff.; Etudes, pp. 65 f.) that the words with ζ - are taken from another IE language. For the words usually represent things or proceedings that form part of material civilization. However, it seems to be improbable that (as was likewise assumed for Hittite!) the general IE word for 'yoke' should have been borrowed, although in that case one could point to for instance Lat. bos. The idea naturally remains a gratuitous one, as long as it cannot be demonstrated with reference to other words too that they have been taken over from another IE language and as long as it cannot be demonstrated on other grounds too that they must have been borrowed. Since nothing indicates this, this solution does not seem correct to me. He makes an important remark when he says that, while this ζ - already had such a sound in Mycenaean (supra), the transition $i > \infty$ was still going on (ote ∞ as against jo- ∞ (∞), if the latter interpretation is correct.

B. THE NEGATIVE ADJECTIVES WITH NH-, NA-, N Ω -

The negative adjectives with $v\eta$ -, $v\bar{v}$ -, $v\omega$ - must in my opinion be explained by means of the laryngeal theory. As the development assumed here, which has been incidentally proposed by Sturtevant and Austin (*infra*), forms a strong argument for the view defended here of the development of the prothetic vowel and the disyllabic roots (in Greek), it calls for careful discussion.⁴⁰ First a discussion of the material follows.

1. THE MATERIAL

A list is given below of the words concerned in alphabetical order, with the name of the author in whose work each one was first found. In the case of the words preceded by a question-mark, it is uncertain that they belong to this group. Those preceded by a dagger occur only at the place(s) stated. The list is based on LSJ (and Moorhouse, *Gr. Negatives*, pp. 51-4).

⁴⁰ After this chapter had been written I saw that B. Forssman, *Unt. z. Spr. Pindars*, pp. 145-9, had discussed the same subject. Our conclusions agree almost entirely.

```
? νηγάτεος (?) '?' Hom. (Β 43 Ξ 185).
νήγρετος (ἐγείρω) 'unwaking' Hom. (ν 74. 80).
† νηδεές (δέος) 'without fear' Alcm. (26,4 Page).41
νῆϊς (οἶδα) 'ignorant' Hom. (Η 198 9 179).
† νηκερδής (κέρδος) 'unprofitable' Hom. (P 469 ξ 509).
† νηκέρως (κέρας) 'not horned' Hes. (Op. 529).
† νήκεστος (ἀκέομαι) 'incurable' Hes. (Op. 283).
νηκουστέω (ἀκούω) 'not to hear' Hom. (Υ 14).
νηλεγής (ἀλέγω): ἀφρόντιστος, ἀθρήνητος Hsch. 42
νηλεής (ἔλεος) 'pitiless' Hom. (passim).
  νηλεής (ἀλέομαι) 'unavoidable' Hom.
† νήλευστος (λεύσσω) 'not seen' [Theocr.] Syr. 20.
? νήλιπος (ἦλιψ) 'shoeless' S.
† νηλίτιδες (ἀλιταίνω) 'guiltless' Hom. (\pi 317 = \tau 498 = \chi 418).
νημερτής (ἀμαρτάνω) 'unerring' Hom. (passim); Dor. ναμ. Tragg.
† νημηθής (-μηθής) 'thoughtless' Inscr. Phrygia (Ramsay, Stud. East. Rom.
  Prov., p. 123).
νηνεμίη etc. (ἄνεμος) 'windlessness' Hom. (Ε 523 Θ 556 ε 392 μ 169).
† νηπαθής (πάθος) 'free from suffering' Opp. Apam. (C. 2.417).
† νήπαυστος (παύω) 'unceasing' Lyc. 972.
? νηπεδανός (ἠπεδανός) 'weakly, light' Opp. Apam. (C. 3.409).
† νηπεκτής (πέκω) Hsch. νηπεκτέας ἀκτενίστους.
  † νήπεκτος Epic. Alex. Adesp. (2.30).
νηπελέω (*ἄπελος) 'be without power' Hp. (ap. Gal. 19.124).
νηπενθής (πένθος) 'banishing pain and sorrow' Hom. (δ 221).
† νηπευθής (πευθ-) 'unsearchable' Orac. ap. Macr. (Sat. 1.18.20).
  † νηπυθές ἄπευστον Hsch.
  † νήπυστος 'not heard' Nonn. (D. 11.199).
? νήπιος (?) 'infant' Hom.
† νήπλεκτος (πλέκω) 'with unbraided hair' Bion (1.21).
νήποινος (ποινή) 'without compensation, penalty' Hom. (Od. \alpha \beta \xi \sigma).
  νάποινος μάταιος Hsch.
νήριτος (ἀρι-) 'countless' Hes. (Op. 511).
  νήριθμος [Theocr.] 25. 57, Lyc.
νῆστις (ἔδω) 'not eating' Hom. (Τ 156.207 σ 370).
† νήτιτος (τίνω) 'unavenged' Inscr. IG 14. 1389 ii 33.
† νητρεκής (-τρεκής) 'sure' Lyc.
```

See following note.

⁴² Forssman (n. 40), p. 147, n. 3: "Die zweite Bedeutung bei Hesych deutet auf (sekundäre) Beziehung zu ἕλεγος; vgl. die benachbarten Glossen νηλεγές· ἄνοικτον, ἀθρήνητον; νηλεγέως· ἀνοίκτως." At the place in Alcman (26,4 Page) cited in LSJ s.v. νηλεγής the text gives νηλεές, which must probably be changed into νηδεές (Boissonade) (cf. ἀδεές Phot.).

```
† νήυτμος (ἀϋτμή) 'breathless' Hes. (Th. 795).
† νήφρων (φρήν) 'senseless' Claudian. (Gig. 2. 23).
νωδός (ὀδών) 'toothless' Ar., Arist.
νώδυνος (ὀδύνη) 'painless' Pi.
νωθής (ὅθομαι) 'sluggish' Hom. (Λ 559).
νωθρός Hp. (Pl., Arist.)
νωλεμής (?) 'unceasingly' Hom. (passim).
νώνυμ(ν)ος (ὄνομα) 'nameless' Hom. (M 70 = N 227 = Ξ 70; α 22 ν 239 ξ 182).
πορετεα<sub>2</sub> (πο̄pheleha) (ὄφελος) 'useless' Myc. PY Sa 682 + (Docs. p. 374).
νωχελίη (?) 'laziness, sluggishness' Hom. (T 411).
† νώψ' ἀσθενής τῆ ὄψει Hsch.
```

2. Interpretation

a. Chronology

The first question that must be dealt with here is that concerning the relation between νη-, νω- of words that begin with vowel and those of words that begin with consonant. For this question the words whose derivation is uncertain and those whose first occurrence cannot be dated should be left out of consideration. The following are unclear: νηγάτεος νήλιπος (probably derived from ήλιψ; this word is in that case the only one derived from a word beginning with a long vowel) νηπεδανός νήπιος νήΰτμος (where the origin of ἀΰτμή is not known) νωλεμής νωχελίη.

The following words cannot be dated: from Hesychius νηλεγής⁴³ νηπεκτής νηπυθής νώψ and further νημηθής νηπευθής νήτιτος.

If we arrange the remaining words in chronological order we get the following picture for $\nu\eta$ - of words with consonant.

```
Hom.
              Hes.
                            older poetry
                                             Hellen, and later
† νηκερδής
                            † νηδεές Alcm.
                                             † νήπαυστος Lyc. III B.C.
              † νηκέρως
νηπενθής
                                             † νητρεκής Lyc.
νήποινος
                                             † νήπλεκτος Bion II B.C.
νῆϊς
                                             † νήλευστος [Theocr.]
                                             † νήπεκτος Epic. Alex. Adesp.
                                             † νηπαθής Opp. Apam. III A.D.
                                             † νήπυστος Nonn. IV/V A.D.
                                             † νήφρων Claudian. IV/V A.D.
```

In my opinion the picture thus obtained is not susceptible to a dual explanation. Some of these forms are already found in Homer. In the case of $v\tilde{\eta}\ddot{\iota}\zeta$ it should be

^{48 &#}x27;Ανηλεγής (Q.S., Hsch.) is also assumed with great probability in Hom. τανηλεγής; cf. Leumann, Hom. W., p. 45. Division into -τα νηλεγέος (θανάτοιο) is less probable, since in that case the formula would not coincide with a caesura.

remarked that forms of the stem $\[\text{Fείδ-} \]$ with a long augment are also found in Homer (ἡείδη(ς)). Of νηκερδής (P 469 ξ 509) ἔπος νηκερδὲς ἔειπες (ξ 509) seems to have been created on the pattern of Γ 204 ἔπος νημερτὲς ἔειπες; ⁴⁴ one is inclined to derive νηκερδέα βουλήν (P 469) from νημερτέα βουλήν, which is found in α 86 = ε 30. Besides ποινή ἄποινα (II.) occurs as substantive, which may have facilitated the formation of νήποινος. Νηπενθής occurs in Homer only in δ 221.

After Homer (and Hesiod) this formation occurs only in Hellenistic authors, the first being the notorious Lycophron. All these words are ἄπαξ λεγόμενα, which of course may be coincidental, but more probably suggests that these are only literary nonce-words. For νήπαυστος cf. νωλεμής, with the same meaning ('unceasingly'). Νηπαθής is probably after the example of Hom. νηπενθής.

It is also striking that $\nu\omega$ - of words beginning with consonant is not demonstrable. The forms with $\nu\eta$ -, $\nu\omega$ - of words with vowel give an entirely different picture.

Myc. noperea2	Ηοπ. νήγρετος νηκουστέω νηλεής † νηλίτιδες νημερτής νηνεμίη νῆστις νωθής	Hes. νήκεστος νήριτος	older poetry νώδυνος (Pi., S.)	class. language νηπελέω Ηρ. νωδός Αr.	Hellen.
---------------	--	-----------------------------	-----------------------------------	---	---------

This survey suggests that this type was old, widely represented in Homer, and even demonstrable in Mycenaean, while some do not occur for the first time until later. It is improbable that νηπελέω was a late creation, since *ἄπελος is no longer demonstrable anywhere. With regard to νήριτος Leumann, Hom. W., pp. 243 ff., assumes that it goes back to ι 22 ναιετάω δ' Ἰθάκην εὐδείελον ἐν δ' ὄρος αὐτῆ | Νήριτον εἰνοσίφυλλον ἀριπρεπές, with numerous arguments. In that case νήριτος belongs in the Homer column. For νήκεστος see below.

Another argument may be that beside $\nu\eta$ - of words with vowel mostly more recent forms with $\dot{\alpha}\nu\eta$ - occur, while beside $\nu\eta$ - before consonant only older forms with $\dot{\alpha}$ - are found. In my opinion this indicates that $\nu\eta$ - before consonant is recent and takes the place of $\dot{\alpha}$ -, whereas $\nu\eta$ - of words with vowel is old and was gradually transformed into $\dot{\alpha}\nu\eta$ -, not directly replaced by $\dot{\alpha}\nu$ - (+ *short* vowel), which also happened.

Beside vn- before consonants one finds:

```
νῆϊς Hom. Η θ ἄτδρις ἀτδρείη Γκλμ
νηκερδής Hom. ἀκερδής S. (ἀκέρδεια Pi.)
νηπενθής Hom. ἀπενθής A.
```

⁴⁴ For ξ 509 see Hoekstra, Modifications, p. 59.

(ἀνάποινος Hom. A 99) νήποινος Hom. νηκέρως Hes. άκέρως ΡΙ. άδεής II. νηδεής Alcm. νηπαθής Opp. ἀπαθής Α. νήπαυστος Lyc. ἄπαυστος Parm., A. νήπεκτος Epic. Alex. Adesp. ἄπεκτος Androt. (IV B.C.) νηπευθής Orac. ap. Macr. ἀπευθής Hom. νήπλεκτος Bion (II B.C.) ἄπλεκτος A.P. 7. 412 (Alc. Mess. III/II B.C.) νήπυστος Nonn. ἄπυστος Hom. νήτιτος45 inscr. ἄτιτος Hom. ἀτρεκής Hom. νητρεκής Lyc. νήφρων Claudian. ἄφρων Hom. νήλευστος [Theocr.] (ἄλευστος Hsch.) Beside vn- of words beginning with vowel the following forms are found (to be distinguished into four groups: I. åνη-, åνω- more recent; II. ἀνη- older; III. ἀνε-, ἀνο- more recent; IV. no other form.) I. νηκουστέω Hom. (Υ 14) άνηκουστέω Hom. (O 236 = Π 676) ἀνηλεής Men. -έως Hp. -έητος Aeschin. νηλεής Hom. -εήτως Ar., Pl. ἀνελεής pap. (IV A.D.) -έητος Arist. νηνεμίη Hom. άνήνεμος S.

νῆστις Hom. άνηστις Α. νώδυνος Pi., S. ἀνώδυνος S., Hp. νώνυμ(ν)ος Hom. ἀνώνυμος Hom. (9)

 $(MN\Xi \alpha v\xi)$

noperea₂ Myc.

ἀνωφελής Α. ἀνήκεστος Hom., ἀνακ. Hp. II. νήκεστος Hes.

III. νήγρετος Hom. ἀνέγερτος Arist. νημερτής Hom. ἀναμάρτητος Hdt. νωδός Ar., Arist. ἀνόδων Arist. νωθής Hom. ἀνόθηρος Hsch.

IV. νηλίτιδες Hom. νώψ Hsch.

The last group (IV) is irrelevant here. Of the third, a form ἀνη-, ἀνω- is not known. The forms with αν- differ here in formation from those with νη-, νω- and are more recent. The first group demonstrates that ἀνη- (ἀνε-), ἀνω- is more recent than νη-, νω-. Nor was anything else to be expected: it would be incomprehensible if ἀνη-

⁴⁵ The form νήτιτος is probably made after Hom. νήποινος.

were replaced by $\nu\eta$ -, if an old $\nu\eta$ - did not exist. This replacement can, we see, already be observed in Homer.

It is striking that Hesiod has νήκεστος as against Hom. ἀνήκεστος. However, it is improbable that νήκεστος is a form resulting from phonetic development; see p. 110.

b. Conclusion

The conclusions from the preceding examination are then as follows.

- (1) The negatives with $\nu\eta$ -, $\nu\omega$ are old; they are present in a large number in Homer.
- (2) They disappear from the language. They are replaced by ἀνη-, ἀνω- or by entirely new formations with ἀν- followed by short vowel. This replacement already began with Homer: ἀνηκουστέω (? ἀνήκεστος, ἀνώνυμος) as against sixteen with νη-, νω- (including νηγάτεος νωλεμής νωχελία).
- (3) Nη-, νω- is old in words that began with vowel. The form spread to words that began with consonant, but exclusively in the artificial language of Homer, Hesiod, (Alcman) and Hellenistic poetry. The first development can be outlined in Homer: (? νῆϊς), νήποινος (Od.) beside ἄποινα (II.), νηκερδέα after νημερτέα; νηπενθής (δ).

c. Attempts at an Explanation

PIE used *ne as sentence negation, and in compounds *n; in general it is assumed that these two are related (latterly Moorhouse, op. cit., pp. 41-6), although some reject this idea (Puhvel, Lg. 29 (1953) 14-25). Gray, Lg. 1 (1925) 119-29, operates with a basis *anē, for which there is, however, no ground: Gr. Skt. a- before consonant cannot be so explained, nor, come to that, ne. Thus Kuryłowicz, Etudes, p. 243, works with *ħne (as form II of *ħen), because ne/n is not a normal type of ablaut. However, I do not see how this simplifies the problem: is *ħn-e so much more comprehensible than *n-e? Puhvel (loc. cit.) also works with *ħn-, of which the n was always vocalic, since every word would have originally commenced with consonant. As stated (p. 90 ff.), the latter assumption is unfounded and the form ħn- explains nothing and is suggested by nothing. The article by Puhvel makes matters particularly complicated (in his own special fashion) by bringing into the discussion all conceivable sandhi variants (nine), of which, however, nothing — outside what was already long known — has any basis in fact; cf. p. 108. See the criticism of Moorhouse, pp. 44-6 and 59 n. 1.

Moorhouse rightly also disclaims that the form ἀνα- is of importance to this discussion. Its development can be followed step by step: Hom. ἀνάεδνος (I 146. 288 N 366)⁴⁷ and ἀνάποινος (only A 99; based on ἄποινα?). Hesiod has ἀνάελπτος (*Th*. 660), which looks like an imitation of ἀνάεδνος (cf. ἐέλπομαι/ἔλπομαι beside ἔεδνα/ ἕδνα), and ἀνάπνευστος (*Th*. 797). Solmsen, *Unters.*, pp. 264-6, has pointed out that

⁴⁶ Cf. his explanation of νόθος from * $H\eta$ - $H\eta$ odh-. In my opinion this form, with double \hbar_2 , would have become *ἀνᾱροθ-.

One expects here a form *νήεδνος. Cf. also p. 59.

this place, ἀλλά τε κεῖται ἀνάπνευστος καὶ ἄναυδος, is an imitation of ε 456 f., ὁ δ' ἄρ' ἄπνευστος καὶ ἄναυδος | κεῖτ' ὀλιγηπελέων, and evidently is based on an incorrect interpretation of this place or still others (or is it instead deliberate 'embellishment'? For ε 456 there is a varia lectio ἀνάπνευστος). Ἀνακηδής (Democr.), ἀνάγνωστος (Call.?) and ἀνάπταιστος (Suid.) then follow. It is clear that this is an artificial form that is of no importance to PIE. Gray (loc. cit., p. 121) recalls the New Greek forms ἀνάβακτος ἀνακέφαλος ἀνάκακος, where ἀνα- is equivalent to ἀ-. Moorhouse rightly points out that these forms "could have arisen at any stage in the language".

Wackernagel, Vorl. üb. Syntax 2., p. 284, who explains the form $dv\eta$ - as dv- $(< \eta)$ with compositional lengthening of the first syllable of the following word, which in principle is highly feasible and may be correct for some cases, has suggested that vnbe explained in this way from ν-η- (νήνεμος < ν- $\bar{\alpha}$ νεμος), with n- as a variant of ne/p. Frisk (s.v. $v\eta$ -) combines this in what is probably deliberately a not entirely clear manner with the most widespread explanation, that from ne- (with contraction; infra): "Durch Analogie nach νηλεής, νήνεμος u.a. gebildet, die zunächst für ν-ηλεής ν-ήνεμος mit gedehntem Anlaut des Hintergliedes stehen (können), aber letzten Endes wohl die Satznegation *ne enthalten". It seems to me that Frisk is of the opinion that vn- of words that begin with vowel does not have the same origin in all cases, but has been formed partly on the analogy of $v\eta - \langle *ne + e/a - as v + \bar{e}/\bar{a} - .$ This is a valuable idea. It is probable that vn- has been secondarily extended, also in the case of words beginning with vowel, since it was later likewise used before consonant. However, he does not regard $n-\bar{e}/\bar{a}$ - as the origin. I tend to share this view, because otherwise there is not the slightest indication of PIE n- (beside n-). Moreover, in this case compositional lengthening is not self-evident, since after all nothing is changed in the syllabic structure of the word by the addition of n-. (The latter is an argument only if the succession of short and long syllables is regarded as decisive for the compositional lengthening and is not interpreted as a mechanical extension of IE contraction of vowels. Cf. also p. 94).

As Schwyzer, p. 431 n. 6, remarks, $\nu\eta$ - could in itself be PIE * $n\bar{e}$, Skt. $n\bar{e}$, Lat. $n\bar{e}$, but, as has been demonstrated above, $\nu\eta$ - before consonant is secondary and the origin in words that begin with vowel points rather to something like contraction. Moreover, $\nu\bar{\alpha}$ - ($\nu\bar{\alpha}\mu\epsilon\rho\tau\dot{\eta}\varsigma$ Tragg.) testifies against * $n\bar{e}$ (Schwyzer, ibid.).

There remains the generally accepted supposition (Schwyzer, p. 431, Lejeune, $Trait\acute{e}$, p. 179 n. 2, Moorhouse, p. 57, Frisk, supra) that $v\eta$ - goes back to the sentence negation *ne, contracted with the following vowel. However, there are insurmountable objections to this.

As stated, PIE *ne is sentence negation and it is not used in compounds. It is, however, found in combination with *-kue, Skt. naca, Lat. neque, Osc. nep, Goth. nih (cf. Myc. ouqe) and *-ue, Skt. navā, Lat. neu, W. neu, which can be immediately explained by its original function. One cannot speak of compounds here. It is also combined with pronouns and adverbs, Skt. nákiş, 'no one, none', Av. naēčiš, Lith.

niēkas, W. nep, OIr. nech and above all in Latin, nemo, nihil (cf. OHG neo-wihts), non < *ne-oinom, nullus, neuter and numquam nusquam (nequam nequaquam). Ne is also found in a number of other combinations, which can be immediately explained by the original function: Lith. nėsti, Goth. nist and above all in Latin nefas, nego, nescio, nolo (cf. OE nylle < *ne-wille). Sanskrit has a few compounds, namura 'immortality', na-ciram 'not for long', na-puṃsaka- 'unmanned, neutral'. See Moorhouse, pp. 32 ff. (For Latin recently Leumann, Glotta 42 (1964) 110.)

Only in Balto-Slavic is ne- generally used instead of *n-, OCS ne-bogs 'poor', ne-gasims 'unauslöslich', ne-cists 'impure'; Lith. ne-läbas 'not good', ne-pigùs 'not moderate'. And yet OCS -je- perhaps displays a trace of the old n, ne-je-vèrs 'unbelieving', ne-je-syts 'pelican' ('the insatiable'?). However, it is striking that ne is very rare in bahuvrihis (Moorhouse, pp. 36 and 57), while a large number of the words with vn-, vo- are bahuvrihis. (See below for the conclusion from these data.)

It is clear that we are concerned here with extensions that took place in the individual languages.

A second objection is that there is not a trace left in Greek of ne as sentence negation. Even in the combinations *ne- k^ue , *ne- k^uis Greek has où instead of ne. This argument would weigh all the more heavily if the connection of où with Arm. $o\check{\epsilon}$ were correct. See for this Moorhouse, pp. 15-8, and Cowgill, Lg. 36 (1960) 347-50, who traces it back to *(ne) $\hbar_2 o\check{\mu} (k^uid)$, 48 of which * $\hbar_2 o\check{\mu} u$ is found in Skt. $\bar{a}yu$ ($\hbar_2 ei\check{\mu}$ -in $\alpha \hat{i} \epsilon \hat{i}$), and for which locution he gives parallels in Germanic. For this would suggest great age for où and would imply that *ne was displaced at an early stage, while the theory discussed here supposes a secondary extension of *ne.

A further very considerable objection is that one would expect *ne-, νε- before consonant too, of which there is no evidence. Compare for this the above-mentioned extension of *ne-, especially in Balto-Slavic, which took place principally before consonant. The Greek words suggested, νέκταρ and νέποδες, cannot be used as proof of the existence of such forms.

The word νέποδες occurs only once in Homer, δ 404: φῶκαι, νέποδες καλῆς 'Αλοσύδνης. Later it does not occur again until the Hellenistic period, in the meaning of 'children' (Theocr. 17.25, Call. fr. 77), to which not much value may be attached, since this meaning has probably been concluded from the Homeric instance. The word is later explained (Apion ap. Apollon. Lex.) as νηξίποδες from νέω or as ἄποδες with νε- = νη-. Compare for this νήποδες ἰχθύες Hsch. The first explanation is certainly incorrect, and the second is no more than an attempt to explain νε- by identifying it with a word that resembles it; this has of course only the value of a grammarians' construction, and does not represent an old tradition.

The varia lectio of h.Ap. 78 does not have any separate value. Delos, giving expression to her fear that Apollo will despise her and cause her to disappear under water, says there: "πουλύποδες δ' ἐν ἐμοὶ θαλάμας φῶκαί τε μέλαιναι οἰκία ποιήσον-

⁴⁸ For oiu > ov cf. *pohiu > Skt. pāyú, Gr. πῶυ (see p. 173; cf. Lejeune, Traité, p. 145). One would, however, expect traces of hiatus. Mycenaean is not written with a j (o-u).

ται ἀκηδέα χήτεϊ λαῶν" where ἕκαστά τε φῦλα νεπούδων has also been handed down for the last three words. One has the impression that the word νέποδες has only been used for the sake of the contrast with πουλύποδες 'many-footers'. One reason for this was probably that ἀκηδέα χήτεϊ λαῶν was not understood ("their dwellings... that remain undisturbed, because there will of course then be nobody who could trouble them"). One cannot otherwise imagine that this not particularly troublesome text would have been changed so radically. In any case it seems certain — in view of φῶκαι — that δ 404 is the basis of it. This is also the only place with νεπουδ- (or νεποδ-).

The only authoritative place is therefore Homer, in which connection it should be borne in mind that it is not certain that the word still has its original form and meaning here. For Halosydne see Frisk. The connection with $nep\bar{o}tes$ is incorrect, since ἀνεψιός corresponds to it; see p. 45. The meaning 'cousin' does not fit properly into Homer either. Νέποδες could also mean something quite different, e.g. 'escorts'.

The explanation of νέκταρ by means of an element νε- is entirely unprovable; this view is shared by Frisk s.v. Cf. p. 160f.

There is thus no trace of a Gr. vɛ- from PIE *ne and a Greek contraction ne-a- $n\bar{a}$ -, $ne-o->n\bar{o}$ - has still to be demonstrated. If the contraction is to be placed in PIE, the drawback is that $n\bar{e}$ - $n\bar{a}$ - $n\bar{o}$ - would also be expected in the other languages, of which there is no evidence, and above all that, as discussed above, *ne is not used in compounds in PIE.

This explanation, too, therefore proves untenable and another will have to be sought.

d. Explanation by Means of the Laryngeal Theory

If it is assumed that in compounds only p- is old, which in Greek gave α - before consonant, and α - before vowel, it is clear that here p- was followed by another element than the consonants and vowels assumed of old for PIE, namely a phoneme that in Greek became a vowel, since $\nu\eta$ -, $\nu\omega$ - originates in words with vowel. These considerations suggest a laryngeal.

If the cases which have a chance of being old are put together, i.e. omitting forms with $\nu\eta$ - before consonant, as well as that which seems to be derived from a word with long vowel and those whose etymology ($\nu\eta\gamma\dot{\alpha}$ τεος $\nu\dot{\eta}$ πιος $\nu\dot{\eta}$ υτμος $\nu\omega\lambda$ εμής $\nu\omega\lambda$ ελία) or age ($\nu\dot{\omega}$ ψ) is unknown, the result is as follows:

-3	α-	O-
νήγρετος	νήκεστος	νωδός
νηλεής	νηκουστέω	νώδυνος
νῆστις	νηλεής	νωθής
	νηλίτιδες	νώνυμ(ν)ος
	νημερτής	noperea ₂
	νήνεμος	
	νηπελέω	
	νήριτος	

It is striking that in many cases, at least nine out of the sixteen, the first vowel of the word from which they are formed is a 'prothetic vowel' (the words spaced). This is also pointed to by the prevailing structure, $\nu\eta CVC$ - of words with VCVC-, much more rarely $\nu\eta C$ -, from VC- (i.e. coalesced with the stem vowel, $\nu\eta\sigma\tau\iota\zeta$ $\nu\omega\delta\dot{\varsigma}$ $\nu\omega\vartheta\dot{\eta}\varsigma$).

A parallel elsewhere makes it highly probable that we are in fact concerned here with a phonetic development. In the zero grade of the disyllabic roots one gets the same group RH in the middle of the word. Uncertainty prevailed about the phonetic representation of this group ($\rho\bar{\alpha}$ and $\rho\omega$ were mentioned). However, in my opinion the material points to $\rho\bar{\alpha}$ $\rho\eta$ and $\rho\omega$, as is explained at length in chapter XI. This development becomes understandable with the aid of the laryngeal theory. The agreement between these two phenomena is so striking that in my opinion the development $\eta\hbar_1 > \nu\eta$, $\eta\hbar_3 > \nu\omega$ beside $\eta\hbar_2 > \nu\bar{\alpha}$ can no longer be doubted. This confirms that the three laryngeals in Greek preserved their original opposition, which is the most important proposition that is defended in this study.

The idea that $v\eta$ - goes back to \bar{v} - is already found in Brugmann-Thumb, Gr. Gr. 1913⁴, p. 102, where it is given without further argumentation. Only $\dot{\alpha}\mu$ - in $\dot{\alpha}\mu\phi\alpha\sigma(\dot{\eta})$ is regarded as a variant beside $v\eta$ - from \bar{v} -. The view that this $\dot{\alpha}\mu$ - is a phonetic form has now been generally abandoned, cf. Frisk s.v. and Chantraine, Gr. Hom., p. 99. Moreover, αv cannot come from \bar{v} before consonant. Nor can $\dot{\alpha}v\alpha$ - beside $v\eta$ - be the phonetic representation of \bar{v} ; it has been demonstrated above that this form is not old.

The explanation of vη- from n+1 laryngeal was first given by Sturtevant, Lg. 16 (1940) 85, for vῆις. It is, however, improbable that the stem *ueid- had a laryngeal despite the long augment of ἢείδει. In any case there is no evidence of a prothetic vowel. The connection with Hitt. hu-u-i-tar 'fauna, the animals' (still made in Comp. Gr., pp. 50 f.) is not convincing from the semantic point of view. The γ assumed by Sturtevant (that is \hbar_3) would have given *vῶις. (However, the formation of this word suggests great age; must one assume *nē-yid-?)

In this way Austin, Lg. 17 (1941) 83-93, also explains νηκουστέω νημερτής νήγρετος. However, he does not seem to have considered the consequences of this explanation, because he mentions it en passant, without going more deeply into it.

The same is true of Cowgill (p. 152), who states with reference to $v\dot{\omega}vu\mu(v)o\varsigma$: "certainly representing a pattern that began in roots with initial laryngeal, where $*\eta$ -HC- became $*\bar{\eta}$ -C", referring to Puhvel. Puhvel's formulas, Lg. 29 (1953) 14-25, display the combination $\eta + \hbar > \bar{\eta}$, but although he also notes the connection with the prothetic vowel and assumes that this developed from laryngeal, he rejects the explanation defended here. A first element of the following word could not be contained in vη- (etc. and ἀνη-, ἀνα- which he all regards as original sandhi variants), since the same lengthening is found in the εὐώνυμος, ἡνεμόεις types. These objections do not hold water. The first is a case of compositional lengthening, for the second see Leumann, Hom. W., pp. 109 f., IF 61 (1952) 1-16 = Kl. Schr., p. 365 n. 7; cf. Chantraine, Gr. Hom., p. 98. I do not see to what extent these forms refute the explanation defended here. As demonstrated above, n + compositional lengthening is not possible.

An objection that might be adduced is that there is no representative of this form that can be pointed to in the other languages. For one would expect Skt. $\eta - \hbar C > a\hbar C - ah C - a\hbar C - ah C - ah$

e. The separate Forms

There are still various problems of detail.

The form $v \dot{\eta} \gamma \rho \epsilon \tau \sigma \varsigma$ must go back to *η- $h_1 gr$ -etos. For -etos cf. ἄ-σχ-ετος (Av. a-zg-ata-), ἄ-σπ-ετος etc., likewise with zero grade of the stem; Schwyzer, p. 502.

With νήριτος (cf. Arc. ἐπάριτοι) it is difficult to make out whether we are concerned with a stem form $*\hbar_2eri$ - or $*\hbar_2ri$ -. However, the zero grade is normal here, cf. Myc. akitito (ἄκτιτος), ἄφθιτος — Skt. ákṣita-, ἄκριτος (cf. ἀκριτόφυλλον — νηριτόφυλλον ap. Hsch.) and in particular ῥυτός from the stem *Fερυ-.

νηλίτιδες occurs solely in π 317 = τ 498 = χ 418. The length of the first ι is striking, because this is historically inexplicable (ἀλειτ-/ἀλοιτ-/ἀλιτ-). In view of the parallel forms one would expect full grade (νηλεής νημερτής νηπελέω νηλεγής νωλεμής noperea2 νωχελία). It is therefore obvious that the original form was *νηλειτ- (as also read by Schwyzer, p. 464). The ending $-\iota$ ς $-\iota$ δος beside the predominating $-\eta$ ς is also strange. It appears that most manuscripts have νηλιτεῖς

⁴⁹ As already suggested by Kurylowicz, *Etudes*, p. 30.

Phr. nadrotos is interpreted by Haas, Phr. Spr., p. 97 f., as 'entmannt'. However, as demonstrated, an element ne- is improbable. The form n- to be expected cannot be contained in the word, for n before vowel becomes an (knoumanei < -mn-ei). The sole possibility would be that Phr. na- corresponds to Gr. $v\bar{a}$ - and goes back to $y\bar{h}_2$ -. One might assume that the substantive (Haas starts from *\bar{a}dro 'Kern, Hode') was cognate with *\bar{h}_2n\bar{e}r 'man', which suggests a basic form *\bar{v}-\bar{h}_2nr-o-to-. However, there is nothing to indicate nr > dr, while the group mr, for which one would then expect br, is maintained (Temroge).

(-ητεῖς), which gives a versus spondiacus. This was perhaps one of the reasons why the form ending in -ειτεῖς (-ιτεις?) was replaced by the more frequent -τιδες (beside ἀλείτης Γ 28 υ 121, cf. ἰκέτης — ἰκέτις). It therefore seems to me that the original text had νηλειτέες (νηλιτέες ms. J in π 317; cf. νηλιτέες ἀναμάρτητοι, ἀναίτιοι, [ἄχρηστοι] Hsch.) See Add.

νηλεής is from * h_1 le μ -es; cf. Lejeune, Traité, p. 222; for νηλέι etc. *ibid.* and Chantraine, Gr. Hom., pp. 73 f.

νημερτής. With reference to ἁμαρτάνω Frisk says "Bildung und Herleitung unklar". The Aeolian form ἤμβροτον gives an aorist stem *amrt-, which in structure, apart from the first vowel, is similar to *drk- in ἔδρακον, *drp- in Aeol. δρόπωσι (con.), Pi. δράπων. Parallels with two initial consonants are ἔκτυπον ἔστυγον ἔστιχον, ⁵¹ with vowel as first phoneme ἤριπε ἤρυγε ἤλυθε (ἐριπ- ἐρυγ- ἐλυθ-) and, the closest parallel, ἀλιτεῖν (ἀλιτ-; pres. *ἀλιτ-αν-]ω, cf. ἁμαρτ-ἀν-ω). In the latter cases the first vowel is, as we saw, a prothetic vowel, i.e. in origin a laryngeal, so that these stems originally had the form HRe(R)C- (ἀλιτ- < * $\hbar_2 lit$ - etc.), which meant that *amrt- was probably * $\hbar_2 mrt$ -. Schwyzer, pp. 704 and 748, thinks of a present formant τ, but ὀλισθ- < * $\hbar_3 lidh$ -t- is not an exact parallel of * $\hbar_2 mrt$ -; ἀλιτ- beside ἁμαρτ- and the form νημερτής point much more strongly to a PIE enlargement t.

If this analysis is correct, $\nu\eta\mu\epsilon\rho\tau\dot{\eta}\varsigma$ ($\nu\bar{\alpha}\mu$. Dor.) may therefore be based on * η - \hbar_2mert -. The fact that the full grade does not occur again anywhere else points to the great age of the form. It is very frequent in Homer, where it is striking that the word occurs much more frequently in the *Odyssey* that in the *Iliad*: 27 times as against 4 (A 514 Γ 204 Z 376 Ξ 470, and further as the name of a Nereid, Σ 46).

As a cognate Froehde (BB 20.215 f.) mentions Lith. mirštù, 'to forget', Skt. mṛṣyati 'idem'. The difference in meaning does not seem an insurmountable objection. In that case âµaρτ- would go back to *ħ₂mṛst-. The aspiration can then be ascribed to the s (Lejeune, Traité, pp. 118 and 102). An objection that has been adduced to this is that ρστ became στ, not ρτ (Solmsen, Beitr., pp. 1 ff., Lejeune, Traité, p. 118). Another objection is that Arm. moranam 'to forget' ($\dot{r} < rs$) has no prothetic vowel, as *ħ₂merst- would suggest. These two objections, plus the fact that the meaning 'to forget' has been preserved everywhere except in Greek and the fact that the aspiration from s cannot be demonstrated in identical cases (Lejeune, loc. cit.), seem to me to weigh too heavily to maintain the etymology.

Some would like to explain the form from $*sh_2mrt$ -, as Juret did (*Dict. grec et latin*, p. 85), but in my opinion this form would have given *smrt-> $*\mu\alpha\rho\tau$ - ($*\mu\rho\alpha\tau$ -> $*\beta\rho\alpha\tau$ -); see p. 85 ff. Moreover, νημερτής calls for an s-less form. In my view the basic form cannot therefore have been other than $*h_2m(e)rt$ - (for the structure compare $*h_2m(e)ld$ - in ἀμέλδειν etc.). The aspiration remains a difficulty. I see no basis for analogy.

For $v\omega \chi \varepsilon \lambda i \eta$ (T 411) one may therefore posit * $\hbar_3 ghel$ - (* $\hbar_3 eghl$ -) *shel-), which, however, is not further known. Connection with $\delta \chi \lambda o \zeta$, however, is neither formally Note that this group is very small; only sC and $\hbar C$ besides $\kappa \tau$.

nor semantically (if the idea of 'movement' is the most ancient; v. Frisk s.v.) impossible.

For vωλεμής Frisk (with Fick) assumes a substantive *ὅλεμος, which might be *ħ₃lem- (beside *ħ₃elm- > *olm-); cognate with Lith. limti 'zerbrechen' as 'uninterrupted'? One might also think of the root ὁλε- (of ὅλλυμι), with a development *p-ħ₃lh₁-m- > vωλεμ-; it cannot be demonstrated that this was in fact the development of such a basic form (rather than *vωλημ-).

If ἄκος goes back to * $\hbar_2 ek$ -os (see p. 129), νήκεστος (Hes.) cannot be old, for * η - $\hbar_2 ek$ - would have given * $\mathring{\alpha}$ νακ-. Or do we have here a trace of original ablaut: * $\hbar_2 \acute{e}k$ -os/* $\hbar_2 k$ -es-, cf. ἄφενος/ἀφν-ειός < * $\hbar_2 bhen$ -os/* $\hbar_2 bhn$ -es-, p. 52)? The same problem occurs with νηνεμίη, where ἄνεμος (Lat. animus) is based on * $\hbar_2 en\hbar_1$ -mos. It is easy to understand that here (cf. $\mathring{\eta}$ νεμόεις) a form with νη- was created.

In cases where νη- was phonetic it cannot be made out whether the variants with ἀνη- go back to a new formation ἀν- $\bar{\alpha}$ - or to a transformation of νη- on the analogy of ἀν + vowel (i.e. ἀ-νη- instead of νη-). In fact it cannot be determined at all whether compositional lengthening occurred with v- $\bar{\alpha}$ - before vowel, but this seems probable; see below p. 111. If this were so there were therefore also old forms with ἀνη-. It will be clear that these then exerted influence on the small group with νη-. It is also probable in this situation that forms which originally had ἀνη- sometimes acquired variants with νη- in epic language (in particular). Such a case could be Hom. ἀνήκεστος: Hes. νήκεστος. One also has this impression with ἀνώνυμος: νώνυμ(ν)ος.

νώδυνος cannot be phonetic if the interpretation of ὀδύνη (from *ed-un-) given above (p. 54 f.) is correct.

ν ώ ν υ μ ν ο ς occurs in the verse νωνύμνους ἀπολέσθαι ἀπ' Ἄργεος ἐνθάδ' Ἀχαιούς M 70 = N 227 = Ξ 70 and in α 222; the form νώνυμος occurs in ν 239 and ξ 182 (the latter verse ὅπως ἀπὸ φῦλον ὅληται | νώνυμον ἐξ Ἰθάκης Ἀρκεισίου ἀντιθέοιο cognate with the Iliad verse?). It may be remarked in this connection that (ἀ)νωνύμους cannot be used metrically. If the analysis given on p. 47 is correct, ὄνομα did not have a laryngeal and the form must therefore be analogic.

Returning to the list of pp. 99f., the following may be added.

For νώψ see s.v. νῆστις etc. supra. The form seems recent. For the range of meaning cf. νωδός.

The etymology of $v \dot{\eta} \pi \iota \circ \varsigma$ is unknown. As this is not a specific word from the language of poetry, an analysis with $v\eta$ - before consonant seems improbable. For instance, this is the case with the connection with * $\mu e k^{\mu}$ - 'to speak' ('infans'), i.e. * $v\eta$ - $F\varepsilon\pi$ -; the same applies to * $v\eta$ - πF - $\iota \circ \varsigma$ with $v\eta$ - $\pi \dot{\circ}$ - $\iota \circ \varsigma$ (e.g. Lejeune, Traité, p. 70 n. 2). Pisani (AGIt. 31 (1939) 49-51) assumes on the strength of Epicurus, fr. 113,11 Arrighetti, [v] $\alpha\pi \dot{\circ} \alpha$ original a-vocalism, which is now also found in Myc. naputijo (personal name). He connects it with Lat. apiscor, Skt. āpnóti, with the meaning 'ineptus'. This could therefore point to * η - $\hbar_2 p$ -, but a-vocalism is not certain for āpnóti (* $\hbar e \hbar p$ -, on account of $\hbar s a t \dot{\circ} \gamma$ - $\hbar v \dot{\circ} \gamma$

νήλιπος, which comes from ξλιψ, cannot be old, since the long vowel cannot go back to a laryngeal; the word ξλιψ itself is not clear.

νή ϋτμος is derived from ἀυτμή, the form of which is not clear; see p. 57 s.v. ἄημι.

f. Vanished Forms

It should also be pointed out that it is not impossible that some forms with ἀνη-, ἀνω- go back to νη-, νω-, as emerges for ἀνωφελής (A.) from Myc. $noperea_2$. These words are, from Homer:

```
† ἀνήμελκτος ι 439; ἀνήνυστος π 111 (ἀνύω) 'of no effect'; † ἀνήνωρ κ 301.341, Hes. Op. 751; ἀνήροτος ι 109.123 (cf. ἀρηρομένη Σ 548; see p. 119); ἀνώϊστος Φ 39, -τί δ 92, and more recent: ἀνηρεφής Α.R., ἀνώροφος Lyc. ἀνωμοτί Hdt., -τος Ε. and from Hesychius ἀνήμυκτος ἀνήρεστον ἀνωλόφυκτος.
```

These words can of course also have ἀν- with lengthened vowel (partly through the influence of ἀνη- for νη-?), which is certain for ἀνήμετος (beside ἀνέμετος) Hp. (originally F-, Skt. $v\acute{a}miti$), ἀνήνιος 'without pain' Hp. (ἀνάνιος Hsch.; ἀνίη < *an-is-jā, Kuiper, AION 1 (1959) 157-65), ἀνώροφος (since the δ- is probably based on assimilation in *ἐροφ-), ἀνώμαλος Ε., Pl. (s-), ἀνώχυρος Χ. (s-), ἀνήνυστος (s-). With ἀνήροτος and ἀνωμοτί a phonetic development *v- h_2rh_3 -tos > *ναροτος is conceivable (but see p. 110 s.v. νωλεμής). Beside ἀνώλεθρος (Parm.) Homer has ἀνόλεθρος (N 761). For ἀνήνωρ cf. νῶροψ p. 75 f.

3. NATURE OF THE LARYNGEAL

As the development found here is also of great importance to the interpretation of the disyllabic roots, it is useful here to underline the necessity of a basic form $*p-\hbar C$ -.

Theoretically, consideration could be given to explaining $n\bar{e}$ - etc. otherwise with the aid of a laryngeal. For instance, one could postulate a sound group $*n_{-e}\hbar C$ -. This is impossible because n- (in this form) is not a PIE form (see above) and because the prothetic vowel (or in general the first vowel of the simplex) cannot have developed from $_e\hbar C$ - (p. 94 f.).

The group $n-\hbar_e C$ - (for the n- see above) would have given $n\breve{a}C$ -, since the laryngeal disappears before vowel (with colouring); for \hbar_e see p. 94 f.

One should start from an element v. If one wants to combine this with the theory of reduced vowels, one gets from $v_{-e}\hbar C$ - (for a refutation of $v_{-e}\hbar C$ -) and $v_{-e}\hbar C$ -. If, as Austin does, one wishes to start from $v_{-e}\hbar C$ -, then the result would be $v_{-e}\hbar C$ -, which would have given $anh_e C$ -> $an(\hbar)aC$ -> anaC-. This development would (of course) be the same as that of $v_{-e}\hbar C$ - (p. 110 s.v. vhrests).

With vocalic laryngeal n-hC- (an otherwise inconceivable structure) would in my opinion have led to anaC-.

The only possibility that thus remains is n-hC-, which for the consonantal laryngeal is in agreement with the conclusion regarding the prothetic vowel (p. 95), and for the n- presupposes the only form of the negative element that PIE seems to have had in compounds.

4. SUMMARY

If one summarizes the above one can give the following sketch of the problem of the forms with $v\eta$ - and $v\omega$ -.

There is no indication that PIE knew other forms of the negative than n-, ne and $n\bar{e}$. $N\bar{e}$ cannot explain $v\bar{\alpha}$ -, $v\omega$ -. The length may be explained by contraction of ne with following vowel, which forms can be demonstrated to be the oldest. However, there are the following objections to this explanation:

- (1) ne is sentence negation and is not used in compounds. The extension of ne in Latin and Balto-Slavic is clearly secondary.
- (2) Greek has no trace of ne. As où is probably cognate with Arm. $o\xi$, this replacement took place at a very early stage.
 - (3) One would also expect ne before consonant, as in Latin and Balto-Slavic.
- (4) The forms with $v\eta$ -, $v\omega$ appear very frequently in words with prothetic vowel, which did not yet exist as a vowel in PIE.
- (5) An early Greek contraction $ne-a > n\bar{a}$, $ne-o > n\bar{o}$ has not been demonstrated. These considerations lead to the origin being sought in n. If this is combined with the fact that among the oldest forms many words with prothetic vowel occur, of which

it is plausible on other grounds too that it developed from a PIE laryngeal, one arrives at a basic form $\eta - \hbar C$. It is obvious to assume a development $\eta \hbar_1 C - > n\bar{e}C$, $\eta \hbar_2 C - > n\bar{a}C$, $\eta \hbar_3 C - > n\bar{o}C$, to which the disyllabic roots also point.

The secondary development of this type may be outlined as follows.

In Homer the type has already been extended to forms with vowel of another origin (also $\hbar e$ -, where one would expect η - $\hbar e$ - > $an(\hbar)e$ -: νηνεμίη from ἄνεμος < * $\hbar_2 en\hbar_1$ -mos). Even in Homer these forms are replaced by ἀνη-, ἀνω- (ἀνηκουστέω), a development which is continued in the living language. In Homer one finds on the other hand extension to words beginning with consonant (νῆϊς νηκερδής νήποινος νηπενθής). This extension was not continued again until the Hellenistic authors and probably belongs to artificial language, notably that of the epic. Not only were these forms regarded as typically epic, but they also had great expressive force (νητρεκής, νήφρων). Nω- is never found from words that begin with consonant. Some of these words escaped the general tendency and still live on in New Greek. This will be due to the fact that they are no longer sensed as negatives. One finds νηνεμία νῆστις νωδός νωθρός νωχέλεια (-ής).

C. ATTIC REDUPLICATION

1. THE PROBLEM

Attic reduplication is the name given to that form of reduplication in Greek in which the reduplicating syllable consists of the first vowel + consonant and in which the vowel of the second syllable is lengthened: $\hat{\epsilon}\lambda\hat{\eta}\lambda\omega\vartheta\alpha$ from the stem * $\hat{\epsilon}\lambda\epsilon\omega\vartheta$ -. Until relationship of other forms has been demonstrated, the term should be reserved for this phenomenon. The name 'Attic' comes from the frequent occurrence of this form in Attic prose, but it is general in Greek, being for instance common in Homer.

Before the interpretation with the aid of the laryngeal theory, there was hardly an attempt to explain this form of reduplication in existence. Schwyzer (p. 766) regards some as transformed from the type with lengthening, ὅρωρα for *ἀρα, cf. Skt. āra, ὅδωδα cf. Lith. úodęs (here, however, the present too has a long o, úodžiu úosti from * $\bar{o}d\dot{\varrho}$). Mention may also be made here of Goth. $\bar{o}g$, OIr. ad- $\bar{a}gor$ (cognate with Gr. ἄχομαι); ἤχα, Skt. $\bar{a}ja$ (although this form is confined to grammarians), Lat. $\bar{e}gi$, OIcel. όk. It should be noted that we are concerned here solely with monosyllables, for which this explanation is in my opinion correct (infra, p. 121); however, the type ἐλήλουθα can hardly have been created entirely on the pattern of ὅρωρα; ὀρ-(:* $\bar{e}r$ -): ὀρωρ- = ἐλυθ- (:* \bar{e} -ludh-): x ought then to have given ἐληλ(ο)υθ-. But the replacement of * $\bar{o}r$ - by * $or\bar{o}r$ - is not understandable in itself and calls for elucidation.

By way of explanation Schwyzer has therefore assumed (p. 766 n. 8) that for instance *rip- was reduplicated into * $r\bar{e}rip$ - and then became $\hat{\epsilon}\rho\eta\rho\iota\pi$ - with prothesis.

However, there are serious objections to these two assumptions. There is nothing to show that the Greek prothesis was added to the separate forms. The so-called 'prothesis' forms a fixed component of the stem. Compare the criticism of Kurylowicz' second explanation, p. 122f.

A second objection is that there is no evidence of intensive reduplication with \bar{e} in Greek; it would after all be inexplicable if this occurred or was preserved only in combination with prothesis. Two cases of such reduplication are mentioned, ἐγρήγορα and δηδέχαται. To regard ἐγρήγορα, which in the first instance stands for *ἐγήγορα, as *γήγορα + prothesis ἐ- and then to use it as an argument for the theory stated here of the origin of Attic reduplication is a petitio principii. For the relation to Skt. jāgára see pp. 117f. and 121. There remains δηδέχαται, which is a very unclear form, calling for more detailed discussion.

The spelling δηδέχαται is based on a suggestion by Wackernagel (infra); the manuscripts everywhere give δειδ-. The word seems more or less to mean 'to greet, welcome' and is generally considered to be cognate with δειδίσκομαι, δεικανάομαι and δείκνυμαι with the same meaning. L. Meyer (KZ 7.201) suggested on the basis of the comparison with Ved. dāśnoti 'offers, honours a god, grants' that δεικνύμενος should be changed into *δηκνύμενος. Wackernagel (BB 4 (1878) 268 ff.) was of the opinion that δειδέχατ' also derived from *δηκ- and that δει- stands for δη-. How he sees this is evidenced by the following (p. 269): 'Allerdings zeigt sich der alte ā-laut in δείδεκτο zu ε, in δειδίσκομαι sogar weiterhin zu ι verkürzt; allein durch die Vergleichung des Vedischen bābadhe aus bādh- werden wir berechtigt δηδέχατ' ... zu schreiben, so dass wir den ā-Laut wenigstens in der Reduplikationssilbe erhalten finden". Therefore he believes that $\delta\eta\kappa$ - was shortened to $\delta\epsilon\kappa$ - and that $\delta\eta$ - in the reduplicating syllable was the repetition of the original root $\delta\eta\kappa$, i.e. * $\delta\eta$ - $\delta\eta\kappa$ -> *δη-δεκ- (as with $b\bar{a}$ -badh-). Others interpreted the δη- reconstructed in this way as intensive reduplication (as $b\bar{a}$ - in Vedic), without mentioning Wackernagel's $\delta \epsilon \kappa$ δηκ-. In this form the theory is accepted by Bechtel, Lex., p. 96, Schwyzer (e.g. p. 648), Chantraine, Gr. Hom., pp. 317 f., 433 f., Frisk s.v. δηδέχαται. In my opinion it has no foundation. There is nothing in Greek that points to a root form δηκ. The reduplication type δηκ-: δη-δεκ-, which Wackernagel reconstructs on the strength of bādh-: bā-badh-, does not exist. Ved. bābadhe is secondary, since one would expect *bābidhe; it has been formed on the example of roots with short stem vowel a and intensive reduplication (in active forms), the type dā-dharti of the root dhar. Thus, as Wackernagel himself says, the only basis for the reconstruction δηκdisappears, and a fortiori for the reduplicating syllable $\delta \eta$. There is thus nothing in favour of changing δει- into δη-, apart from the existence of intensive reduplication in Indian. However, there is no evidence in Greek of such reduplication, so that it is not permissible to construct one such form by conjecture, the more so since a simple explanation can be found in Greek itself. Azi-may be based on metrical lengthening in *δεδεχαται, as in δεικανόωντο if δεκανᾶται (· ἀσπάζεται Hsch.) has the original stem δεκ-.

Both suppositions on which Schwyzer's explanation is based are therefore improbable, so that the latter does not have a sufficient basis in fact.

As against the explanation by De Saussure, Mél. Graux, p. 743, by rhythmic lengthening of a group $\circ \circ \circ$ to $\circ - \circ$, it may be adduced that the third syllable in the type *ἐλελουθ- is long in the singular. Nor can the opposition ἀραρεῖν: ἄρηρα, ορορείν: ὄρωρα be explained in this way. Moreover, this presupposes a reduplication of the type *el-eloudh-, which is not plausibly of PIE origin. Roots of the structure VCV(R)C- (i.e. like $\&\lambda \& v\theta$ -) are not PIE. For then one would have to assume a root *el-, which with enlargement would have given *l-eu-(dh-), not *el-eu-. This type is therefore first of Greek origin, i.e. it first acquired this form in Greek. There is little support in Greek for a reduplication type *έλ-ελουθ-. The forms that are regarded as such are (Schwyzer, p. 766): ἐρέριπτο (Ξ 15), ἀκάχημαι (Hom.), ἀκαχμένος (Hom.), ἀλάλημαι (Ψ 74; -ήμενος (accent) Od.), ἀλαλύκτημαι (only K 94). Ἐρέριπτο is an unexplained form. L. Meyer suggested reading *ξροιπτο, which seems to me an unwarranted interference with the text. Schwyzer's suggestion (p. 766) that ἐρεριπ-/ έρηριπ- (in κατερήριπε Ξ 55) developed on the example of ἔριπε/ἤριπε does not seem to be an adequate explanation, since one would then expect such interchanges more frequently. After all, forms with and without augment occur very often side by side and there is nothing to show that this led to confusion. I regard ἐρεριπ- as an artificial form from epic language which is based on incorrect interpretation of other forms, although I cannot state which (ἀκαχ- beside ἀκηχ-?). For ἀκάχημαι beside άκηγ- see p. 119. I there regard the second form as a transformation of the first for metrical reasons, and the first as based on the aorist. Ἀκαχμένος is regarded as ak-ak-s-menos (Frisk s.v.), and is therefore a case of total reduplication. It has been presumed that ἀλάομαι and ἀλύω have the same root, in my opinion without sufficient reason. Beside ἀλαλύκτημαι Hesychius gives ἀλαλύσθαι φοβεῖσθαι, ἀλύειν. Ι assume that these forms go back to reduplication of the whole root and regard ἐρέριπτο and ἀλαλύκτημαι as anomalies, the latter possibly under the influence of άλάλημαι. In this way Myc. araromotemena 'ararmotmena' will have derived its reduplication from araruja (infra). It does not seem certain to me that these forms are in origin perfect forms; cf. ἀλαλύσθαι, ἀλαλήμενος (accent) and what has been said about ἀκάχημαι, p. 119. The conclusion is, I think, that we have here a very small group of strange forms which do not offer sufficient support for the presumed reduplication type (*ἐλ-ελουθ-).

In Eos 30.206-11 Kuryłowicz⁵² has suggested an explanation by means of the laryngeal theory. The stem *έλευθ- goes back to PIE * \hbar_1 leudh- and the reduplication syllable consists of the first two consonants + the reduplicative vowel e, i.e. * \hbar_1 le- \hbar_1 loudh- > έληλουθ-; or from the root * \hbar_1 ne \hat{k} - in ἐνεγκεῖν, * \hbar_1 ne- \hbar_1 no \hat{k} - > ἐνηνοκ-.
⁵² W. Winter, who says in Lg 26 (1950) 533: "Sturtevant has shown (Indo-Hittite Laryngeals (1942) 68) that the lengthening of the reduplication syllable in the Sanscrit perfect type vāvāsa [v. infra] is often caused by the original presence of an initial laryngeal in the root; I have identified such forms with the so-called Attic reduplication perfects in Greek" was therefore, even if independent, certainly not the first.

The length of the second syllable was therefore caused by compensatory lengthening after the fall of the laryngeal in -eHCV-. He claims that the first vowel is an originally consonantal laryngeal vocalized in Greek, i.e. a phenomenon identical with that of the prothetic vowel. This therefore implies that this manifestation of Attic reduplication could occur only in Greek (and Armenian). It is therefore all the more advisable first to study the Greek material, to see whether and to what extent this explanation is tenable.

2. THE MATERIAL

A survey first follows of the forms with Attic reduplication, classified according to the time in which they are first demonstrable and to their formation. However, the forms are not included which evidently go back to older cognates (ἐρήρεικα Dsc., (προσ-) Plu. going back to ἐρήρεισμαι Hdt. Hp.; ἀλήλεκα A.P. (Nicarch., I A.D.), going back to ἀλήλε(σ)μαι Hdt., Hp.) and forms which did not appear until after the beginning of the Christian era (ἀρήρεκα from ἀρέσκω Corn. (I A.D.), ἐρήριμμαι from ἐρείπω Arr., ἐμήμεκα Luc., ἐγήγερκα Philostr.). The latter may not be expected to be of importance to the origin of the reduplication. For instance, ἐμέω originally began with γ- in view of Skt. vámiti. Ἐμήμεκα must therefore be a recent form, which probably developed on the analogy of forms like ἄμοσα: ὀμώρισκα (= ἤμεσα: x). The same applies to ὁράω (ἔωρων < *ἢ-γορ-), so that ὁρώρηκα Herod. cannot be old; Attic has here ἑόρᾶκα Ar., from γε-γορ- (see LSJ s.v. ὁράω). From the same stem there appears in Ψ 112 ὁρώρει, which belongs to ὅρομαι (however, in Mycenaean this does not have a w-: oromeno 'oromenos').

The survey is followed by a short discussion of the individual forms insofar as there is anything to say about them.

stem	Homer (Myc.)	V, IV B.C.	Hellen.
o	έγρήγορθα εἰλήλουθα ? ἀ-, ἐνήνοθε	ἐγρήγορα Ar. ἀκήκοειν Hdt. ἐνήνοχα D., μετ- Pl. ἐνήνεγμαι Pl., εἰσ- E.	
zero	-ερήριπε (Ξ 55) δδώδυσται (ε 423) ἐρήριστο	ἐρήριγμαι Ηp. ἀλήλιμμαι Th. ἀλήλιφα D. ὀρώρυχα Pherecr. ὀρώρυγμαι Hdt. π Hes.	
e Med.	άγηγέρατο ἐρηρέδαται	ἐλήλεγμαι Pl. (ἐνήνεγμαι Pl., εἰσ- Ε.)	

ήρήρειστο δρωρέχαται άκηχέ(δ)αται

disyll.

έλήλαται

όμώμοται Α.

ὄλωλα

ομώμοκα Ar., E.

άρηρομένη (Σ 548)

άλήλε(σ)μαι Hdt., Hp.

monos.

anomalous

ἄρηρα (araruja) έδηδώς (Ρ 542) έδήδοται (χ 56) δδώδει (ε, ι) ὄπωπα ὄρωρα

araromotemena

όρώρει (Ψ 112)

(ἀραίρηκα Hdt.)

ἀγήγοχα inscr. δρώρηκα Herod.

ύπεμνήμυκε (Χ 491)

συνοχωκότε (Β 218)

? συναρήρακται· συγκέκοπται Hsch.

When assessing these forms allowance should be made for the original apophonic relations, o-vocalism in the indicative singular, zero in the indicative plural, the feminine participle and the entire middle (insofar as that is old), e-vocalism in the masculine participle and the conjunctive and optative. This situation has only seldom been preserved. Usually extension of one of the apophonic phases has taken place, usually of the zero grade or the o-phase, rarely of the full grade with e; after all, conjunctive and optative perfect are very uncommon. The perfects with e are usually recent forms, although the participle may have stimulated this development. Cf. Schwyzer, p. 771. Middle perfects are in general recent; idem, p. 765 n. 4.

έγρηγόρθασι. For the θ, only in Homer, see Chantraine, Gr. Hom., p. 429; Att. ἐγρήγορα (Ar.) is therefore probably the form to be taken as a starting-point for further examination. It is generally assumed that the first ρ developed by anticipation, partly under the influence of the agrist ἔγρετο. On the strength of the comparison with Skt. jāgāra (perf. of the root gr., pres. jārate), one starts from an original *γηγορα (Schwyzer, p. 648 with n. 3, Chantraine, Morph.2, p. 186), so that the èfrom ἔγρετο must also have been taken over (Chantraine; better than interpreting ἐas prothesis, as Schwyzer does). It seems to me that one is too quick to compare with the other languages here. In Greek, apart from *δηδέχαται discussed above, there is not a single case of a reduplication vowel \bar{e} , so that it is not advisable to make *γήγορα into an independent category. Viewed from Greek, *ἐγήγορα differs in no way structurally from ἐλήλουθα, ἐνήνοχα, ἀκήκοα, so that the most obvious thing is to leave *ἐγήγορα with the other cases of Attic reduplication until the untenability has been demonstrated.

εἰλήλουθα II. Od. passim. Ei- is metrical lengthening. Att. ἐλήλυθα has generalized the zero grade.

?ά-, ἐνήνοθε. It is difficult here to determine the original form. Homer has ἐπενήνοθε (Β 219 ~ Κ 134, ψεδνὴ (Κ οὔλη) δ' ἐπενήνοθε λάχνη; θ 365) and ἀνήνοθεν (Λ 266, αἴμα; ρ 270 (v.l. ἐν-), κνίση). Aitchinson, Glotta 41 (1963) 271-8, hesitantly defends the connection with ἄνθος, which would therefore presuppose * \hbar_2 endh-/ \hbar_2 nedh-. The connection between $\alpha \nu \theta \circ \zeta$ and Skt. andhas- may be abandoned, also because this means 'juice of the soma plant', Burrow, Arch. Ling. 6 (1954) 61. It is probable and understandable that the forms discussed here were connected at an early stage with ἄνθος. Compare beside B 219 ~ K 134 (supra) λ 319 f.: πρίν σφωϊν ύπὸ κροτάφοισιν ἰούλους | ἀνθῆσαι πυκάσαι τε γένυς εὐανθέι λάχνη. In ἀνήνοθε too the influence of $dv(\alpha)$ - may be envisaged. It therefore seems somewhat more probable that ἐνήνοθε is the original form, since its development from ἀνήνοθε is not explicable. In that case the connection with ἐνθεῖν (cf. Frisk) is possible, with as Greek stem forms $\dot{\epsilon}\nu\vartheta$ -/ $\dot{\epsilon}\nu\epsilon\vartheta$ -, i.e. PIE * \hbar_1 endh- (\hbar_1 ndh-?)/ \hbar_1 nedh- (so that in the other languages *nedh- is expected for the latter form; Frisk's notation eve9-: evo9-: ev9may give an incorrect picture). 'Ενήνοθε then has Attic reduplication (which would also be obvious even if $dv\eta vo\vartheta \varepsilon$ were original, rather than $dv(\alpha) + \eta vo\vartheta$, since old perfects of this structure are rare). It is not clear to me how one must picture èvand dv- "als verschiedene Reduplikationsformen" (Frisk).

 $\dot{\epsilon}$ νήνοχα Pl., has the expected o-vocalism; $\dot{\epsilon}$ νήνεγμαι on the other hand, with e in the middle, is a more recent form.

-ερήριπε, only Ξ 55 τεῖχος μὲν γὰρ δὴ κατερήριπεν, has the zero grade of ἐρειπ- generalized from the plural. (Chantraine, Gr. Hom., p. 426 with n. 3, unnecessarily sees a problem here.) The intransitive meaning (which incidentally is not certain) might confirm the age of the form. Ἐρέριπτο Ξ 15 is unclear; the middle form seems to suggest that this is a later form; see p. 115.

όδώδυσται ε 423 belongs to the aorist δδύσσασθαι; further analysis is uncertain, see Frisk.

ἐρήριγμαι, middle form of ἐρείκω.

 $\dot{\alpha}\lambda\dot{\eta}\lambda\iota\phi\alpha$ D., either under the influence of $\dot{\alpha}\lambda\dot{\eta}\lambda\iota\mu\mu\alpha\iota$ and then a later formation or, if old, with extension of the zero grade of the plural.

 $\delta \rho \omega \rho \nu \chi \alpha$ Pherecr. As $\delta \rho \nu \chi$ -no longer has a trace of ablaut in Greek, formation within Greek is more probable than that the zero grade of an old perfect has been generalized.

ἐρήρισται Hes. fr. 308 MW, from ἐρίζω. Although there are no formal objections, this seems to me a form constructed by Hesiod.

ἀγηγέρατο Δ 211 Y 13 λ 388 ω 21. The middle form with e-vocalism must be a recent formation, like ὀρωρέχαται, ἐλήλεγμαι, ἐνήνεγμαι and the following form.

ὲρηρέδαται Ψ 284. 329 η 95 has been the subject of an attempted replacement by ἐρηρίδαται with the zero grade to be expected in the middle; cf. Chantraine, Gr. Hom., p. 170 (Aeol. ρι > ρε?). The form ἡρήρειστο Γ 358 = Δ 136 = H 252 = Δ 436 καὶ διὰ θώρηκος πολυδαιδάλου ἠρήρειστο has full grade; ἐρήρεισμαι Hdt., Hp.

ἀκηχέ(δ)αται P 637 as against ἀκάχημαι is regarded as an instance of the occurrence of the long second syllable beside the original short one. The first form further occurs only in ἀκηχεμένη (E 364) and ἀκηχεμέναι (Σ 29). Elsewhere (Il. Od.) ἀκάχημαι (-ται, -σθαι) ἀκαχήμενος⁵³ is the rule. As *ἀκαχη-μένη cannot be used in the hexameter, it seems to me probable that this is a metrical question; the η had to be shortened (*ακαχε-μένη) and the second of the (then) four short initial syllables had to be long, which is why ἀκαχη- was replaced by ἀκηχε-, which may be regarded as a metathesis (ordinary metrical lengthening would have given *ἀκᾶχε-). The same applies to the form ἀκηχέ(δ)αται. See further Chantraine, Gr. Hom., p. 435. The stem ἀκαχ- comes from the aorist (ἀκαχεῖν Hom.), where total reduplication is normal (ἀγαγεῖν, ἀραρεῖν, ὀρορεῖν), on which the present ἀκαχίζομαι (Hom.) has also been built.

ἐλήλαται is from the disyllabic root ἐλα-. For the ablaut forms of these roots see below. One further finds ὅλωλα from the root ὀλε-, ἀρηρομένη from ἀρο-, only in Σ 548, ὀμώμοται from ὀμο- and ἀλήλε(σ)μαι from ἀλε-.

ἄρηρα. For the participle ἀρηρώς ἀραρυῖα see p. 121 f. Ἄρηρε only in ε 248 as varia lectio for ἄρασσεν; ppf. ἀρήρει Il. (5 times) and ρ 4.

ἐδηδώς P 542; ἐδήδοται χ 56 after the example of πέποται: ὅσσα τοι ἐκπέποται καὶ ἐδήδοται ἐν μεγάροισι (but the form may of course be older than this verse). ὀδώδει ε 60 and ι 219 (ὀδμὴ ... ὀδώδει).

ὀρώρει see above p. 116.

araromotemena 'ararmotmenā'; the length of the second a is not known. Attic has ἡρμοσμέναι.

ύπεμνήμυκε (X 491) of ἠμύω with long first vowel stands alone in the whole group; see Bechtel, Lex., p. 159.

συνοχωκότε B 218. An unclear form, see Chantraine, Gr. Hom., p. 424. Old Attic reduplication is improbable, since the root was PIE *segh-.

άραίρηκα Hdt. (from αίρέω) has an entirely different form of reduplication.

ἀγήγοχα (inscr. III B.C.) for older ήχα (inscr. VII/VI B.C.) will have been constructed on the analogy of ἐνήνοχα, in view of the fact that ἄγω and φέρω supplement each other semantically ('bring of living creatures' and of 'things'; cf. the expression ἄγειν καὶ φέρειν).

 δ ρ ω ρ η κ α see above p. 116. The form does not appear until late; the old perfect is δ πωπ α .

συναρήρακται Hsch. is undatable.

⁵⁸ The accent is perhaps Aeolic, cf. Hes. Th. 868 ἀκάχων (mss.; -ών, -ῶν papp.); M. L. West, Hesiod, Theogony, p. 82.

3. CONCLUSIONS AND INTERPRETATION

A glance at the survey shows that a large percentage of these forms are already known from the oldest Greek, that a smaller group, some of which may be old, does not appear until later, while another part consists of more recent formations, and that in the Hellenistic period too and even later new forms are still added. On the strength of the above I believe that we need only further take into account the following forms if we wish to investigate the origin of Attic reduplication. The middle perfects have been put separately.

stem:	VCV(R)C-		disyll. roots	monos. roots
o-grade	zero grade	e-grade		
έγρήγορα εἰλήλουθα ἐνήνοθε ἐνήνοχα ἀκήκοα	-ερήριπε ? ἀλήλιφα		ὄλωλα ? ὀμώμοκα	ἄρηρα ἐδηδώς ὀδώδει ὄπωπα ὄρωρα
Med.	ἐρήριγμαι ὀδώδυσται ὀρώρυγμαι	άγηγέρατο ἠρήρειστο ὀρωρέχαται ἐλήλεγμαι	ἐλήλαται ἀρηρομένη ἀλήλε(σ)μαι	

If this list is studied, these forms, viewed from Greek, can be divided into three groups: (1) stems of the type $\hat{\epsilon}\lambda\epsilon\nu\vartheta$ - (VCV(R)C), (2) disyllabic roots $(\hat{\epsilon}\lambda\alpha$ -, VCV) and (3) monosyllabic roots $(\hat{\alpha}\rho$ -, VC). In PIE the second group had the structure VCH (* $el\hbar_2$ -), while, with the possible exception of $\hat{\epsilon}\lambda\alpha$ -, the first phoneme of these words will likewise have been a laryngeal, having regard to their vocalism ($\hat{\delta}\lambda\epsilon$ -< * $\hbar_3el\hbar_1$ -); see pp. 129, 131. The first vowel of the first group is a 'prothetic vowel', i.e. the first phoneme was likewise a laryngeal ($\hat{\epsilon}\lambda\epsilon\nu\vartheta$ - < * \hbar_1leudh -). The first two groups therefore had in PIE an identical structure HCe(R)C- (2. HCeH, e.g. * $\hbar_3le\hbar_1$ -/ $\hbar_3el\hbar_1$ -). The last group, on the other hand, has the structure VC-. With the possible exception of $\check{\epsilon}\delta\omega$ it is probable, having regard to their vocalism, that they began with laryngeal, $\hat{\alpha}\rho$ - < * \hbar_2er -, $\hat{\sigma}r$ - < * \hbar_3ek^u -.

It therefore follows from this that practically all roots of the old forms that have Attic reduplication started with laryngeal. In itself this does not convey much. As these stems began in Greek with vowel, it is probable that most of them began with laryngeal in the proto-language. But what is striking is that the majority of the forms consist of the type VCVC-, which in the proto-language must have been HCVC-, and therefore had laryngeal before consonant. This leads to the supposition that it is in this type that the origin of this form of reduplication must be sought. The same type

proved responsible for the forms with prothetic vowel and for the negatives with νη-, νω-. However, one would expect from for instance $*\hbar_1 loudh$ - in accordance with the normal pattern $*\hbar_1 e - \hbar_1 loudh$ - $> *\mathring{\eta}\lambda o \upsilon \vartheta$ -. The form studied here may be explained by assuming that the first two consonants were repeated, the second laryngeal causing the length of the vowel of the reduplicative syllable and the first (in Greek) becoming a short vowel just like the prothetic vowel: $*\hbar_1 le - \hbar_1 loudh$ - $> \mathring{\epsilon}\lambda \eta \lambda o \upsilon \vartheta$ -. That the first vowel corresponds to the prothetic vowel is evidenced by Skt. $j\bar{a}g\acute{a}ra$, which may be explained from the same basic form as $*\mathring{\epsilon}\gamma \dot{\eta}\gamma o \rho \alpha$ (in $\mathring{\epsilon}\gamma \rho \dot{\eta}\gamma o \rho \alpha$), i.e. $*\hbar_1 ge - \hbar_1 gor$ -. In this way the Indian form is a neat confirmation of Kuryłowicz' explanation. At the same time it proves that $*\mathring{\epsilon}\gamma \dot{\eta}\gamma o \rho \alpha$ is not an independent case of intensive reduplication in Greek but is in complete accordance with the other forms of Attic reduplication.

The disyllabic roots may have had the same forms. With $\delta\lambda\epsilon$ - (* $\hbar_3el\hbar_1$ -) one would in that case have to start from the form * $\hbar_3lo\hbar_1$ -, so that * \hbar_3le - $\hbar_3l(o)\hbar_1$ - > $\delta\lambda\omega\lambda$ (o)-was obtained.

```
*h_1 n e - h_1 n e \hat{k}- *h_2 e - h_2 e r-
*h_1 n e - h_1 n k- *h_2 e - h_2 r- *h_2 r e - h_2 r-
```

As stated, however, the fact that these roots also began with laryngeal need not be of any special significance. We are necessarily concerned with forms that began with vowel in Greek, and most of them doubtless had a laryngeal in the basic language. Perhaps the following consideration indicates that these forms are of recent date.

The form ἀραρυῖα presents a problem. Leumann, Celtica 3 (1955) 241-8 = Kl. Schr. 251-8, discusses this type. He is of the opinion that only in εἰδώς ἰδυῖα is the apophonic difference old and explains ἀρηρώς as against ἀραρυῖα by *ἀραρρως, which became *ἀρᾶρως and was transformed into ἀρηρώς after the example of ἄρηρα. However, this would be the only case in which this interchange u/u had left traces; see Lejeune, Traité, p. 70. And in my opinion it presents the difficulty that the existence of ἄρηρα presupposes Attic reduplication. For one would expect the same reduplication in the other forms of this perfect and therefore also in all forms of the participle. The comparison with εἰδώς ἰδυῖα does not apply here, since this does not

have any reduplication. If the explanation of Attic reduplication defended here is correct, ἀραρυῖα cannot go back to an old form with laryngeal: both $*\hbar_2 re-\hbar_2 er-us-i\hbar_2$ and * $\hbar_2 re-\hbar_2 r-us-i\hbar_2$ had without a doubt to lead to *ἀρᾶρυια. Unfortunately the Mycenaean forms araruwoa araruja are useless, since nothing is known about the length of the vowels. The conclusion is therefore that either ἄρηρα is old and ἀραρυῖα secondary, or vice versa. Now it does not seem probable to me that ἀραρυῖα is secondary, for in historical Greek it could be formed solely after the example of μεμακυῖα (Δ 435), τεθαλυῖα (Ι 208), λελακυῖα (μ 85), but — whatever the origin of these forms may be — there is no indication that they are older than ἀραρυῖα. It therefore seems that this participle has been built on the stem $\alpha \rho - \alpha \rho$, which is found in the agrist. In ἀραρυῖα the form ἀραρ- is therefore not perfect reduplication in origin; cf. the forms ἄγυια, ἄρπυια/ἀρεπυια, ὅργυια/ὀρόγυια, which have the same suffix on a stem that is not reduplicated. Total reduplication with the suffix -μενος is found in ἀκαχμένος (*ak̄-ak̄-s-menos) and probably in Myc. ajameno ? 'aiai(s)menos'. In that case the form ἄρηρα will be more recent. This is perhaps indicated by the fact that the finite forms in Homer are very rare: ἄρηρα etc. does not occur, ppf. άρήρει Γ 338 ~ Π 139 ~ ρ 4 (not in Gehring), Κ 265, (ἐπ-) Μ 456, (ἠρήρει) Μ 56; further only the conjunctive ἀρήρη ε 361 (in ε 248 ἄρηρεν as varia lectio of ἄρασσεν). If ἄρηρα is secondary, that will also apply to the other forms of this category, although ὄρωρα and ὅπωπα, which are very frequent in Homer, might be older. Are these formed after $\ddot{o}\lambda\omega\lambda\alpha$ (if the explanation given above of this form is correct)?

a. Criticism; Kuryłowicz' second Explanation

An essential difficulty is of course that this explanation of Attic reduplication presupposes the repetition of the two initial consonants in the reduplicative syllable. This difficulty induced Kurylowicz himself later to refute his explanation and to suggest another, *Apophonie*, pp. 269-72. This explanation, which I consider to be untenable, may be discussed here.

In the explanation Attic reduplication started from stems with prothetic vowel which had not developed from laryngeal. Of the stem *leudh-, for instance, the perfect was normally *le-loudh-, both of which forms acquired a prothetic vowel, *e-leudh-, *e-le-loudh-. Afterwards, on the strength of the present *eleudh-, the perfect was reanalysed as *el-eloudh-. Finally, the second syllable was lengthened on the analogy of the lengthening in compounds, e.g. $\check{\epsilon}\pi$ -ηλυς, π οδ-ηνεκής.

Kuryłowicz himself already points out that this explanation applies only to roots with prothetic vowel e; in the case of o, for instance, an auxiliary hypothesis must additionally be assumed. For the perfect * \mathring{o} - ρ e- ρ o γ - of \mathring{o} pé γ ω could hardly be interpreted as * \mathring{o} p- ε po γ -, with \mathring{o} p- as reduplication of $\mathring{\varepsilon}$ po γ - (also in view of the present stem \mathring{o} pe γ -). Here * \mathring{o} pe ρ -, * \mathring{o} p η p- would by analogy have to be replaced by \mathring{o} pop-, \mathring{o} p ω p-.

Apart from the latter difficulty, there are various insurmountable objections to this attempt at an explanation.

In the first place this view ignores the existence of the laryngeals. In the case of the root ever-beside the forms $*en\hat{k}-/ne\hat{k}$, to which the other languages point, $*\hbar_1ne\hat{k}$ -is after all highly self-evident, while the laryngeal is confirmed by the long augment in Skt. $\bar{a}nat$.

In the second place this explanation presupposes the existence of prothetic vowels — in the literal sense of the word — of a different origin than from vocalization of a laryngeal. After the above their existence in Greek words of PIE origin must be gravely doubted.

A following point is that prothesis for the separate verbal forms is highly improbable and in my opinion is not demonstrable in Greek. The prothetic vowel forms an indissoluble part of the root. Cf. the criticism of Schwyzer, p. 113 f.

It is extremely improbable that a prothetic vowel upset the old system of reduplication.

Finally — and this is an essential point in the theory — influence of the nominal compositional lengthening on verbal forms is most improbable. It is unacceptable that this could have influenced a reduplication form and have been the cause of an entirely new type.

This explanation is therefore based on a series of hypotheses which are all highly improbable.⁵⁴

b. Consonantism of the Reduplicative Syllable

Although Kurylowicz' second attempt at an explanation has not been successful, this does not alter the fact that the repetition of both initial consonants remains a problem in his first explanation, that by means of the laryngeal theory.

There is one other case of repetition of the two initial consonants in the reduplicative syllable. This is found in the stems that begin with s + occlusive. For here Iranian, Greek, Italic and Celtic have s-sT, but Latin has $sT-T^{55}$, Indian T-sT and Gothic sT-sT; this is also pointed out by for instance Schwyzer, p. 649 n. 1. Cf.

s-sT	sT - T	T - sT	sT - sT
Lat. si-sto	Lat. ste-ti	Skt. tí-sthati	Goth. staí-stald
Gr. ἵ-στημι	(spo-pondi, sci-cidi)		(skaí-skaiþ)
Av. hi-štaiti			

⁵⁴ In the same way Kuryłowicz explains the forms ἐνεγκεῖν (*e-ne-nk-), ἀλαλκεῖν. One can start here, as Puhvel, Lg 30 (1954) 457, does, from Attic reduplication * \hbar_1 ne- \hbar_1 nk- > *ἐνηγκ- > ἐνεγκ-(probably via * \hbar_1 ne- \hbar_1 nk- > * \hbar_1 ne(\hbar_1)enk- on account of ἰάλλω < * \hbar_2 i- \hbar_2 l- $\bar{\iota}$ 0 (p. 129) and ὄνητο < * \hbar_3 μ $\bar{\iota}$ 2-to). Incidentally, one would expect this form in the plural of the perfect, but there is no trace of it. Further, * \hbar_1 μ- \hbar_1 μk- is also possible. Finally, in view of the type ἀραρεῖν ἀγαγεῖν ἀπαφεῖν one might also consider * \hbar_1 en- \hbar_1 enk- (unless these forms with total reduplication have zero grade; cf. ἡνίπαπον < *eni- \hbar_2 k^μ- \hbar_2 k^μ-om, p. 129, n. 59).

⁵⁵ If Phr. *ttetikmenos* is based on *ste-tig-menos (from the root *stig-), as Haas, Phr. Spr., p. 88, assumes, one has here too the type sT-T.

On the other hand, of the group s + sonant, only the s is repeated (here, therefore, only Indian, Latin and Gothic are of importance):

```
Skt. sa-smāra Goth. saí-slep Lat. no instance sa-svāna
```

One therefore finds this form of reduplication with s before occlusive and with laryngeal before all consonants. Perhaps the phonetic properties of s and the laryngeals are the cause of this difference and of the phenomenon in itself. I do not see any other explanation within the system of PIE reduplication, and further investigation of this point would take us too far here.

If, then, this problem remains further unelucidated, this drawback is not in my opinion serious enough to discredit the explanation by means of the laryngeal theory. Apart from this point, it is entirely adequate and no further assumptions are required.

4. Indian Parallel

A parallel for the Greek forms is found only in Indian. A form HCe-HC- must appear everywhere else than in Greek (and Armenian) as $C\overline{V}C$ -. The $j\overline{a}g\acute{a}ra$ already mentioned responds to this. There are some thirty of these forms, Macdonell, Ved. Gr., pp. 352 f. One third of these more or less corresponds to forms with indication of laryngeal (in the form of prothetic vowel) in Greek; Kuryłowicz has pointed to this in $Rocznik\ Or$. 4 (1928) 196-218. For instance we have:

```
      νāνṛṣ-
      ἐέρση

      māmṛj-
      ὀμόργνυμι

      rārak-
      ἀλέξω
```

However, it is not probable that all these forms or even the majority of them find their origin in 'Attic' reduplication. The greatest caution is thus called for here, as may emerge from the comparison of the following forms:

```
      vas- 'to stay'
      perf. vāvas-
      ἄ(ϝ)εσα

      vas- 'to dress'
      vāvas-
      (ϝ)ἐσται

      vaś- 'to wish, want'
      vāvaś-
      (ϝ)ἐκων
```

The last two forms therefore certainly do not go back to Attic reduplication.

For an explanation of the Indian forms in quite a different way see Kurylowicz, *Apophonie*, p. 342 ff.

5. SUMMARY

Summarizing one may say that 'Attic' reduplication is a very archaic formation,

comparable with the negative adjectives with $\nu\eta$ -, $\nu\omega$ -. That this type goes back to PIE is proved by the fact that traces of it are also still found in Indian. Preserved in an originally very small group of forms, the procedure underwent minor expansion at various times. The phenomenon gives a neat confirmation of the explanation of the 'prothetic vowel'.

6. APPENDIX: NOMINAL FORMS

There are a few nominal forms which are sometimes connected with Attic reduplication. These are the substantives ἀκωκή, ἐδωδή, ὀπωπή, ἀγωγός, -οκωχή and ὀδωδή and the adjective ἐτήτυμος.

Of these, $\delta \delta \omega \delta \dot{\eta}$ is evidently very recent, AP 9.619, Plu. 2.648a. It was almost inevitable that this word was formed beside $\ddot{\delta}\delta\omega\delta\alpha$ $\ddot{\delta}\pi\omega\pi\alpha$ $\dot{\delta}\pi\omega\pi\dot{\eta}$ ($\dot{\epsilon}\delta\omega\delta\dot{\eta}$).

- ο κ ω χ ή will also be recent, since in this case the root originally began with s (*segh-); one finds συνοκωχή 'joining' Hp., ἀν-, διοκωχή 'stay, cessation' Th. (ἀνοκωχεύω Hdt.), κατοκωχή Pl. A theory on the origin of these words is given by Wackernagel, Gött. Nachr. (Phil.-hist. Kl.) 1902, 738-40: in composition after preceding -α, an original -αοχη became -ωχη, e.g. *ἀναοχή > *ἀνωχή (beside συνοχή Ψ 330); these forms were later clarified by the insertion of -οχ-, *ἀν-οχ-ωχή > ἀνοκωχή. It is indeed striking that this word occurs solely as a compound (ὀκωχή only with grammarians).

ἀγωγός 'leading, guiding' Hdt., Th., -εύς 'haulier' Hdt.

The other words are known from Homer.

 $\delta \pi \omega \pi \dot{\eta}$ 'sight' (both 'view' and 'power of seeing') only in the *Odyssey*, at the end of the verse, in the genitive, ι 512 and γ 97 = δ 327 $\sim \rho$ 44.

 $\dot{\epsilon} \delta \omega \delta \dot{\eta}$ also occurs only at the end of the verse (II. Od. passim).

ἀκωκή also at the end of the verse (except Φ 60) is restricted to two formulas: ἤλυθ' ἀκωκή (6 times) and δουρὸς ἀκωκή (7 times).

Schwyzer (p. 423) compares the type ἀπαφός ('ἔποψ; Lat. upupa; but is this PIE?), ὅλολυς (Lat. ulula): "dieser Typus ist, im Anschluss an die Perfektbildung, produktiv geworden". However, the comparison with the cases mentioned here seems incorrect to me; these are onomatopoeic (as Schwyzer also posits), while in my opinion a sound-imitating element is entirely absent from ἀκωκή etc. Nor can $a\hat{k}$ - $a\hat{k}$ - for instance have been the starting-point of ἀκωκή. Influence of the perfect cannot explain the ω. Attic reduplication does have a long second syllable, but of the same timbre as the first. This explanation would therefore be possible only for ἀπωπή. However, there is no indication that ἀπωπή is older than ἀκωκή or ἐδωδή, while further there is nothing either formal or semantic that makes influence of ἀπωπή comprehensible. The explanation by means of the perfect with Attic reduplication must therefore lapse. True, ἐτήτυμος answers to this scheme, but it is not certain that this word has been formed in the same way as ἀκωκή.

What the origin of this type is remains unclear at present. I see no explanation from Greek. If a PIE type forms the basis, one could start from two forms, $\hbar_2e\hat{k}-\hbar_2\bar{o}\hat{k}$ or $\hbar_2(e)\hat{k}o-\hbar_2\hat{k}$; however, I know parallels for neither of the two formations. (For the type Skt. $t\bar{a}t\bar{r}pi$ - see Kuryłowicz, *Apophonie*, p. 344.) Chantraine's notation $(Morph.^2, p. 6)$ * $\hbar_2\hat{g}$ -o $\hbar_2\hat{g}$ - does not explain the formation either.

II. BEFORE VOWEL

The laryngeal that stood at the beginning of the word before vowel disappeared after \hbar_2 and \hbar_3 had coloured following e, $\hbar_2 e - > a -$, $\hbar_3 e - > o -$; $\hbar_1 e -$ may be found represented as e -. Following e - is not changed, i.e. $\hbar_1 e - > e -$, $\hbar_2 e - > e -$ is self-evident). Since the result of this colouring is found in all languages, it may be assumed that this took place in the common language.

Owing to the fact that this colouring was completed in the proto-language, it is difficult to demonstrate the laryngeal in this position. The most important facts on which the proof is based here are: the data of Hittite, apophonic phenomena and the improbability of a PIE phoneme *a* elsewhere than in a very limited group of words (see below for this). We shall successively discuss the material for the three phonemes.

1. THE MATERIAL

a. H_2

Hittite has only one or two forms that are important here.

 $\dot{\alpha}$ vtí. The h of Hitt. hanti points here to laryngeal, which is confirmed by Lyc. $\chi \tilde{n}tawata$ 'army-leader' (Hitt. $ha-an-te-iz-zi-i\ddot{s}$ 'first'). Here PIE *hanti is conceivable but, also having regard to Hitt. hanza 'front', from which hanti is derived, *hanti is more probable. This reconstruction is therefore based in the main on the third principle stated above.

ἄργυρος belongs with ἀργός, Hitt. harkis, so that laryngeal is certain; see p. 34. On account of Skt. árju-na-, Lat. argentum, ἄργυρος will be based on full grade $\hbar_2 er\hat{g}$ -.

ἀτύζομαι (ἀτυχθείς) 'to be distraught from fear' could be cognate with Hitt. hatugi- 'terrible, dreadful'. However, a structure * \hbar_2 et-ug- is strange; one would expect * \hbar_2 tug-.

Ablaut may give an indication here in various ways. A first group consists of the following words.

αὐδή as against Skt. *vádati* 'to speak' could go back to **au-d-*: * μ -*ed-*, but ἀείδω, which probably must be analysed as * $\hbar_2\mu$ -*ei-d-* (see p. 56 f.), shows the presence of a laryngeal, so that * $\hbar_2\mu$ -*ed-* and * \hbar_2 *eu-d-* (αὐδ-ή) are self-evident. Cf. p. 89.

αὐλή, Arm. aw-t 'place to spend the night', belongs with ἄεσα (* $\hbar_2 u$ -es-) and ἰαύω (* $\hbar_2 i$ - $\hbar_2 eu$ -), so that here * $\hbar_2 eu$ - must have been the basis.

α ὕ ξ ω. Lat. augeo etc. beside Skt. vakṣáyati is based on * \hbar_2 eu-g- $/\hbar_2$ μ-eg-, in view of the prothetic vowel in ἀ(F)έξω. See further p. 89.

Another ablaut indication is the occurrence of forms without vowel at the beginning of the word in other languages. This is therefore the same principle as that of the preceding group, only here the Greek form with prothetic vowel cannot be distinguished from that with old full grade.

 $\mathring{a}\pi \circ$. Skt. $\mathring{a}pa$, Lat. $\mathring{a}b$, Goth. $\mathring{a}f$ etc. as against $\mathring{*}p\check{o}$ - in Av. $\mathring{p}a$ -, Lith. $\mathring{p}a$ -, OPr. $\mathring{p}a$ -, po-, OCS $\mathring{p}o$ -, Alb. $\mathring{p}a$ -, Lat. $\mathring{p}o$ -(situs), OS $\mathring{f}an$, point to $\mathring{*}\hbar_2 \mathring{e}po$ (for the accent Skt. $\mathring{a}pa$, Goth. $\mathring{a}f$): $\mathring{*}\hbar_2 p\check{o}$. Both forms would have given $\mathring{a}\pi \circ$ in Greek, so that it is difficult to make out which form is the basis here, if the two have not coincided.

αἰετός. If it is cognate with Lat. avis and Ved. viħ (gen. véħ) 'bird', then the existence side by side of the last two forms points to an original declension * \hbar_2 éui-s, gen. * \hbar_2 μ -éi-s; Kuiper, Notes, pp. 61 f. As W. hwyad seems to come from *auietos, * \hbar_2 eu- is probably the basis of αἰετός. Cf. Arm. hav 'bird'.

Another form of ablaut which is of importance here is the interchange a/o. Anyone who is not prepared to accept its existence in this form in PIE can explain this interchange as $*\hbar_2e/\hbar_2o$. If this is correct, it emerges from these cases that \hbar_2o became o, not a. Cf. the problem of the development of $o\hbar_2$, discussed on p. 166 f.

With the stem $\alpha \gamma \kappa$ - (Frisk s.v.) there may belong $\delta \gamma \kappa \circ \zeta$ 'barb of an arrow'.

With ἄκρος ἄκρις ('hill-top, mountain-peak' Od.), Skt. aśri- 'corner, sharp point', OLith. aštras 'sharp' etc. there probably belong ὅκρις 'jagged point or prominence', Lat. ocris, Umbr. ukar, gen. ocrer 'arx, mons' (cf. ἀκρόπολις) as $\hbar_2 e \hat{k} - /\hbar_2 o \hat{k}$ -.

For ἄγω the laryngeal is demonstrated by Lat. ago: gero, which is explained as $*\hbar_2 e\hat{g}$ -: $\hbar_2 \hat{g}$ -es- (cf. αὐλή: ἄεσα, $v\acute{a}sati$ from $*\hbar_2 eu$ -: $\hbar_2 u$ -es-). With ἄγω there perhaps belongs ὄγμος 'furrow, swathe, strip of cultivated land' (i.e. $*\hbar_2 o\hat{g}$ -). Lejeune, $Trait\acute{e}$, p. 175 n. 1, concludes on the strength of ἀγός $<*\hbar_2 og\acute{o}s$ the development $*\hbar_2 o$ - > a-. It is clear that in that case an interchange a/o becomes inexplicable; ἀγός may be analogic.

alt i etc. is based on *aiu-. However, Skt. áyu 'lifetime' presupposes *oiu-, a form that is perhaps also found in Gr. où (see p. 105). PIE * \hbar_2 oi-u-/ \hbar_2 ei-u- (before vowel * \hbar_2 eiu- etc.). Cf. Kuiper, *Notes*, p. 31 f.

Of a similar nature is the question of a PIE ablaut ai/i. This question too ultimately amounts to the problem of PIE a, which is dealt with below. As $\hbar_2 ei/\hbar_2 i$ - the supposed ablaut ai/i- fits entirely into the well-known pattern.

αῖξ 'goat', Arm. ayc 'idem' is considered cognate with Av. Ĭzaēna- 'of leather'.

αἰχμή, Myc. aikasama (OPr. aysmis 'roasting spit') is connected as *aik-s-mā with Cypr. ἰκμαμένος and ἰκτέα ἀκόντιον.

αῖσα (αἰτία) may very well be cognate with ἴσσασθαι κληροῦσθαι. Λέσβιοι Hsch. and ἴσσης, which some have tried to read for ἴσης in ι 42 = 549; yet one can easily supplement δαιτός, cf. the formula δαιτὸς ἐίσης, p. 65 f. One could also consider deriving οἶτος 'fate, doom' from the same root (* \hbar_2 eit-/ \hbar_2 oit-/ \hbar_2 it-).

With αἴθω belong ἰθαρός and ἰθαίνεσθαι θερμαίνεσθαι Hsch. The root form *idh- is also found in Skt. idhmá- and inddhé 'he lights' (<* \hbar_2i -n-dh-toi).

Unexpected a is encountered in the root of s-stems, where e-vocalism is normal (cf. Schwyzer, p. 511 f.).

For instance ἄχος, Goth. agis; *ħ₂egh-os.

In the same way also $\ddot{\alpha} \kappa \circ \varsigma$, $\ddot{\alpha} \gamma \circ \varsigma$ (Skt. $\ddot{a}gas$ - does not belong with this).

Another case is formed by the disyllabic roots, where e-vocalism is expected in the aorist.

άρέσαι therefore points to $*h_2erh_1$ -; cf. p. 235.

 \mathring{a} λέσαι points to * $\hbar_2 el\hbar_1$ -;

 \mathring{a} ρ \acute{o} σ α ι points to * $\hbar_2 er \hbar_3$ -. Here the Attic reduplication of \mathring{a} ρηρομένη may give further confirmation (p. 119), as also Hitt. har- $a\mathring{s}$ -zi 'he harrows', if cognate.

An indication of laryngeal is perhaps the reduplication with vowel i of roots that begin with vowel in Greek. For a 'reduplication' type i-VC does not seem probable. In two cases this explanation finds support elsewhere. For ἰαύω the prothetic vowel of ἄεσα beside Hitt. huis, the ablaut ἀεσ-, Skt. vas-: *au- (see p. 89) and the fact that *au- begins with a (infra) point to laryngeal, so that iau- will go back to * $\hbar_2 i$ - $\hbar_2 eu$ -. For $i\dot{\alpha}\pi\tau\omega$ not only the a of the root *ak"-, 56 but also * $\bar{t}\pi\tau\omega$ points to laryngeal: * $\hbar_2 i - \hbar_2 k^{\mu}$ - as against * $\hbar_2 i - \hbar_2 e k^{\mu}$ -. Such forms also occur side by side in Indian, *iyarti*: *îrte* (PIE * $\hbar_3 i$ - $\hbar_3 er$ -: $\hbar_3 i$ - $\hbar_3 r$ -). In this way $i\acute{\alpha}\lambda\lambda\omega$ may be based on * $\hbar_2 i$ - $\hbar_2 l$ - $i\bar{o}$, if not connected with ἄλλομαι, as stated in Leumann, Hom. W., p. 80 n. 45, and thus from *si-sl-iō. In this way $\dagger \chi \alpha \nu \dot{\alpha} \omega$ will be based on *ħi-ħgh-, but as the $\bar{\alpha}$ of $\dot{\alpha} \chi \dot{\gamma} \nu$ points to * $e\hbar_2gh$ -, one will have to start from * $\hbar i$ - $\hbar\hbar_2gh$ - from the stem * $\hbar e\hbar_2gh$ -; see p. 168. Skt. iksate 'sees' is of the type * ξπτομαι. Cognate with this is the group οπīπεύω, which must have been derived from a stem ὀπīπ- (see Frisk s.v.). Attic reduplication (* $\hbar_3 k^u i - \hbar_3 k^u$ -) is improbable with a monosyllabic stem (for $\delta \pi \omega \pi \alpha$ see p. 121),⁵⁷ while the Indian form does not point to this either ($\hbar k_s a t e < \hbar_3 i - \hbar_3 k^u - s$ -); I do not know of any case of Attic reduplication with i as vowel. The comparison with Skt. śvitīcī 'whitish' $< *k^uiti-\hbar_3k^u-i\hbar_2$, pratīc- $< *proti-\hbar_3k^u$ - and perhaps also ἐν $\bar{\imath}$ πή < *eni- $\hbar_3 k^u$ - (but see footnote 59)⁵⁸ points here to *opi- $\hbar_3 k^u$ -. Ablaut with όπωπή is impossible, since an interchange ω/ι is unknown (of course we are not concerned here with a root with 'long diphthong' of the type * $p\bar{o}i$ -/ $p\bar{i}$ -). For $\partial\pi\omega\pi\dot{\eta}$, of which the formation is unclear to me, see p. 125.59

⁵⁶ I am following here the interpretation to be found in Kuiper, *Glotta*, 21 (1933), 282 ff. If Heubeck's interpretation (*IF*, 68 (1963), 13-21) of Myc. $a_3kipata$ 'goatherd' as 'aig-iptas' is correct, the root would not have a labio-velar (for then the Mycenaean form would have been * $a_3kiqata$).

⁵⁷ An entirely different explanation is given by Winter, *Lg*, 26 (1950), 532: *ħ₃ek"i-ħ₃k"-, comparing Skt. bharibhrati/bharibharti. However, Greek does not have another single case of such a reduplication; Winter's parallels μελίβδεσθαι < *mel-i-ml-, μέδιμνος < *med-i-md- and μέριμνα < *mer-i-mr- are, of course, unreliable. (For μέδιμνος the form ϝεδιμνος (Gortyn.) points in my opinion to non-IE origin; cf. for instance κύ(ϝ)-αμος : κύμ-ηχα, Kuiper, Μνήμης χάριν, p. 215.)

For the structure of this cf. $\dot{\epsilon}v\iota$ - $\sigma\pi$ - $\epsilon\tilde{\iota}v$, OIr. insce < *en(i)-sk''- $i\bar{a}$.

⁵⁹ Also difficult are the agrists ἐνένιπε ἠνίπαπε, which must perhaps be regarded in connection with

With this reduplication one can compare Lat. emi, if Benveniste's analysis (Arch. Ling. 1 (1949) 16 ff.) * \hbar_1e - \hbar_1m -i is correct. This structure is of course possible, cf. *de- dh_3 -> de-d- $\bar{\imath}$. However, Benveniste's explanation tacitly assumes that every PIE root began with consonant, which has not been proved (see p. 90 ff.). Moreover, if a certain root really did have a laryngeal, this does not necessarily mean that where this explanation is possible it is also correct. Benveniste himself already points out that * \hbar_2e - $\hbar_2\hat{g}$ - cannot explain Lat. egi, though it might perhaps be the basic form of OIcel. δk (<* $\bar{a}ga$); this does not demonstrate that this is in fact the case. Benveniste's assumption would therefore have to be worked out further.

b. H_3

The possibilities of demonstrating \hbar_8 in this position are fewer, since for instance the ablaut oi/i (such as oĭxoµaı: Arm. ijanem 'to come down') proves nothing here about the presence of a laryngeal (cf. p. 92). Further, o can often be interpreted as ablaut form of e, so that the absence of forms with e can rarely be taken as proof. Nevertheless there are a number of clear cases.

With support in Hittite:

ὀστέον, Lat. os, Hitt. ha-aš-ta-(a-)i [haštai].

ŏϊς, Arg. ὄϝις, Lat. ovis, Luw. hawi-, Hitt. hawa-; cf. Arm. hoviv 'shepherd' if from *oui-pā-.

ὄρνις, Hitt. haraš- 'eagle' (for the meaning cf. αἰετός 'eagle': Lat. avis etc. 'bird'). A difficulty which, however, also occurs elsewhere (e.g. with ὄρνυμι etc.), is presented here by the forms with er-, Lith. erēlis (beside arēlis, OCS orblo), Latv. èrglis (OPr. *arelis, handed down as arelie), W. eryr OIr. ilar < *eriro (Pedersen, VKG, I, p. 491).

the Indian forms; cf. Schwyzer, p. 648. Of the Greek forms, ἐρύκακον seems to have been formed on the example of ἡνίπαπε. Chantraine, Gr. Hom., p. 398 (the present formative κ repeated; the interchange \mathring{v}/\ddot{v} , of which the \tilde{v} may be due to the length of the ι of ἡνίπαπε as well as to metrical lengthening). Ἐνένῖπε seems a more recent form to replace ἡνίπαπε, of which the structure had become unclear; compare ἐκάθισα for καθῖσα etc. The form ἡνίπαπε could be based on *eni-ħsk"-ħsk"-, but from this one would expect *ἡνίποπε. Perhaps for that reason the connection with ἰάπτω *ἴπτομαι is to be preferred (*eni-ħ₂k"-ħ₂k"-). Total reduplication is known in the aorist (ἀραρεῖν ἀπαφεῖν etc.) and for the preverb and the zero grade cf. ἐνι-σπ-εῖν. If this explanation is correct, we are concerned here with 'inner reduplication' in appearance only; as far as I am aware, such a process is foreign to the IE languages; cf. the problem of infixation in the nasal presents. (The Indian form arpipat (from arpáyati) could be analogic, like ἐρύκακον; according to a reduplicated root -pħ-pħ-e/o- Ind. -pipa-?).

 \ddot{o} ζ o ς, Arm. *ost*, can hardly be separated from Hitt. *ha-aš-du-(e-)ir* [*hašdueir*] 'twigs, branches' (not in Frisk; for his view see p. 24).

 $\delta \rho \varphi \alpha v \delta \varsigma$, Arm. orb, Lat. orbus, if Hitt. harp-zi 'to separate' is cognate with it. In this case ablaut gives fewer indications. Interchange oi/i says nothing, and there is nothing that corresponds to a/o. The following may be stated.

ὄναρ. The form ὄνειρος (Arm. anurj < * \hbar_3 nōr-io-) presupposes * \hbar_3 ner-io-. As -αρ goes back to -r in ὄναρ, a full grade of the root is probable here, * \hbar_3 enr. This is also suggested by Albanian, Geg. ândërr, of which the d will have developed in the group -nr- and the first vowel must go back to full grade, since Albanian does not have any 'prothetic vowel', i.e. does not vocalize a consonantal laryngeal as initial phoneme; see pp. 19 f. and 46.

 \mathring{o} μ φ α λ \mathring{o} ς. Here we have *ombh- beside *nebh-. One need only conclude laryngeal here if it is desired to explain the absence of *embh- (i.e. possibly * \hbar_3 en-bh-: * \hbar_3 n-ebh-). See p. 92.

A quite different case is formed by the presumed development $h_3i - \xi$.

o ἴ φω: Skt. yábhati may be *oi-bh-: i-ebh-. Ζέφυρος would demonstrate that *ħ3eibh-: ħ3iebh- was the starting-point here if this connection is correct; see p. 97f. Mention should be made here of two cases where Indian points to laryngeal.

 $\delta \pi$ -, Skt. *İkṣate* < * $\hbar_3 i$ - $\hbar_3 k^u$ -; for $\delta \pi \bar{\imath} \pi \epsilon \dot{\imath} \omega$ see p. 129.

 δ ρ-, Skt. *iyarti* : *irte* from * $\hbar_3 i$ - $\hbar_3 er$ - : $\hbar_3 i$ - $\hbar_3 r$ -.

In the agrist of disyllabic roots o is unexpected:

d μ ό σ α ι < *h₃emh₃-. Cf. ὀμώμοκα, p. 119.

 \dot{o} λέσαι $< *\hbar_3 el\hbar_1$ -. Cf. ὄλωλα, p. 121.

With the s-stems one finds o instead of e in:

 \ddot{o} ρος, which is explained as * \hbar_3 er-os. Cf. \dot{o} ρ- supra.

In some other words too the occurrence of o only is striking.

 δ ζω, Lat. odor, Arm. hot 'smell, odour' (pres. hototim); Lith. úodžiu with long o. However, these words point to an old athematic present that might have had ovocalism.

c. H_1

It is even more difficult to demonstrate \hbar_1 . Ablaut ei/i and e/o is of course not important here. Nor can the presence of e where other vocalism would be expected ever be explained by laryngeal (since $\hbar_1 o$ became o).

ἐνεγκεῖν. If this form goes back to *en-enk-, we have here a case of h_1e - (* h_1e n- h_1e nk-), for h_1 is demonstrated here among other things by ἐνήνοχα, p. 118; cf.

That the athematic present could have o-vocalism has been demonstrated by Meillet, MSL, 19 (1916), 181-92. The theory was elaborated for Slavic by Adriana Buning, Ath. Conj., in particular pp. 28ff., 40ff. and 58f. A recent article is that by Hiersche, IF 68 (1963) 149-59 (who does not seem to know Buning). His attempt at semantic determination, even if justified in principle, seems to me premature with such little material.

pp. 45, 92, 94. However, the form can also be explained otherwise; see p. 123 n. 54. If $\ddot{o}\gamma\kappa\sigma\zeta$ 'bulk, size, mass' belongs with this, as is probable, then that is a case of $\hbar_1o > o$.

ἐνθεῖν. If ἐνήνοθα (p. 118 f.) belongs with ἐνθεῖν, this form may go back to * \hbar_1 endh-. However, if ἐνθεῖν is an old thematic aorist, one would expect zero grade (cf. p. 224 ff.). For * \hbar_1 ndh-> ἐνθ- see below.

 $\grave{\epsilon}\lambda\acute{\alpha}\omega$. If the Attic reduplication of $\grave{\epsilon}\lambda\acute{\eta}\lambda\alpha\mu\alpha\iota$ is old and is based on $*\hbar_1le\hbar_1l\hbar_2$ -, $\grave{\epsilon}\lambda\acute{\alpha}\sigma\iota$ will have had full grade $*\hbar_1el\hbar_2$ -.

ἐρέτης. Skt. ari-tár- as against Lat. $r\bar{e}mus$ points to * $\hbar_1er\hbar_1$ -: $\hbar_1re\hbar_1$ -.

ἔδω. For ἔδω a laryngeal could be evident only from νῆστις, but see p. 110.

2. HRC-

A special problem is formed by the group HRC-. For here the sonant would have vocalic function, of which r and l developed elsewhere into vowel + consonant (or consonant + vowel), while m and l became a vowel (a). The question arises whether the laryngeal affected this development.

An example of this is ἀργός discussed elsewhere (p. 34), which must have developed from $*\hbar_2 r \hat{g} r \acute{o}$. It cannot be derived from this case whether the laryngeal exerted influence on the timbre of the vowel that arose (in Aeolic one would expect $\eth \rho$ - from $\hbar_2 r$ - instead of $\mathring{a} \rho$ -, but I know no case of a development of this kind). What is important is the development to VC (as at the beginning of the word without preceding laryngeal); for a development $\hbar_2 r C$ - $\mathring{a} \rho \alpha C$ - was conceivable. This development also emerges from $\mathring{a} \lambda \kappa - \mathring{\eta}$, which goes back to $*\hbar_2 \rlap/ k$ - (p. 89). The same is true of $*\mathring{a} \rho \pi \upsilon \bar{\alpha} \zeta < *\hbar_2 r \rho \iota s \acute{e} \hbar_2 s$, as against the full grade $\mathring{a} \rho \pi \upsilon \iota \alpha$ (p. 35). Perhaps mention may also be made here of $\mathring{a} \upsilon \eth \rho \acute{o} \varsigma$, which must go back to $*\hbar_2 \jmath r - \acute{o} s$; here allowance must of course be made for the other forms of the paradigm, but $*\hbar_2 n\acute{e} r \eta > \mathring{a} \upsilon \acute{e} \rho \alpha$ would have more probably supported the possible development $*\mathring{a} \upsilon \alpha \rho \acute{o} \varsigma$. One could even expect $*\hbar_2 \jmath r \acute{o} s > *(\hbar) \alpha \rho \varsigma$ here; this form would of course have been replaced, but then by $*\mathring{a} \upsilon \epsilon \rho \acute{e} \varsigma$ (cf. $\mathring{a} \upsilon \epsilon \rho \varsigma$ and Skt. $n\acute{a} r a s$). It therefore seems that $\mathring{a} \upsilon \delta \rho \acute{o} \varsigma$ must go back direct to an old form.

For the question of colouring, the gen. sing. * $\delta\rho\gamma\upsilon\bar{\alpha}\varsigma < *\hbar_3 rgus\dot{i}e\hbar_2 s$ might be important; see p. 37. Here, therefore, the \hbar_3 would have coloured the vowel to o, but it should be borne in mind that the o here may have been introduced from the other forms, e.g. nom. sing. * $\hbar_3 r\dot{o}gusi\hbar_2 > \delta\rho\dot{o}\gamma\upsilon\alpha$, with 'prothetic vowel' $\dot{o} < \hbar_3$. The same applies to $\delta\rho\upsilon\mu\iota < *\hbar_3 r-n-eu-mi$, where the o may for instance have been taken over from the aorist stem $\delta\rho < *\hbar_3 er$ - ($\delta\rho\sigma\varepsilon$). One may further envisage here * $\delta\nu\rho\sigma$, which could be based on * $\hbar_1 \eta u\eta$ (p. 46) and the aorist $\delta\upsilon\theta\varepsilon$, for which * $\hbar_1 \eta dh$ - is probable.

On theoretical grounds colouring is to be expected, in my opinion. As we shall see, in for instance $*r\hbar_3C - *ro\hbar C > \rho\omega C$ and $*r\hbar_3V > *or\hbar V > \delta\rho V$ the timbre of the

vowel was determined by the laryngeal (pp. 210-26), so that this is also probable here. Just as in $\eta\hbar$ the vowel develops after the nasal (while otherwise η itself became a vowel), with $\hbar\eta$ a development to VC is probable.

- N.B. 1. In Latin one would expect $\hbar r > ar$ instead of or-. If this is correct, then \ddot{a} ρκτος ursus had no laryngeal; it is therefore uncertain that Hitt. hartagga belongs here.
 - N.B. 2. I know of no case of the group -HRC- in the middle of the word.

3. PIE a

It has been asked whether PIE had a phoneme a beside e and o, the first to do so being De Saussure ($M\acute{e}moire$, in particular p. 127). Brugmann has no doubt about PIE a. He gives correspondences for a (Grundr., I^2 , p. 158 ff.), ai (p. 178 ff.), au (p. 192 ff.) and posits an ablaut a/o and ai/i, au/u (p. 485 ff.); this point of view may also be found in KVG, pp. 77 and 146 f.

However, it proves that the occurrence of a is very limited. Meillet gives a short survey of it (*Introd.*⁸, pp. 99, 166), which may be summarized as follows. One finds PIE a:

- (1) in a small group of words with a special semantic range;
- (2) as the first phoneme of the word;
- (3) in a few endings.

The last group comprises

- (1) a. the middle ending 3 sg. -tai; b. the middle ending 1 sg. -ai;
- (2) the ending 1 sg. perf. -a.

Of these, the first (1a) ceases to apply, since Myc. euketo ('eukhetoi') confirms Ruiperez' theory (Emerita 20 (1952) 8-32) that this ending was originally -toi.

As regards the last one (2), Kuryłowicz (*Symb. Rozw.*) has demonstrated that it arose from $-\hbar_2 e$; cf. Hitt. -ha, Lyc. $-\chi a$. For in this way the opposition Skt. 1 sg. cakara: 3 sg. $cak\bar{a}ra$ can be understood; see Introduction, p. 10. Here too one is therefore not concerned with PIE a.

The middle ending 1 sg. seems to have been -ai (Skt. -e, Gr. $-(\mu)\alpha i$, under the influence of which -soi, -toi (except in Arcadian) became $-\sigma\alpha i$, $-\tau\alpha i$). This can be traced back to $-\hbar_2 ei$, as Kurylowicz proposed in the above-mentioned article, identifying the nucleus with the perfect ending $-\hbar_2 e^{.61}$ There is no reason to start from $-\hbar_2 oi$, as Ruijgh does (L'élém. ach., p. 14); this is evidently based on the forms

⁶¹ He believed that this could be further found in 1 sg. of the thematic presents $-\bar{o} < -o-h_2$, an idea which he later abandoned, since he then assumed that oh_2 became \bar{a} .

(-soi) -toi. However, this fails to appreciate the fact that the ending (1 sg.) with \hbar and that with s and t (2 and 3 sg.) belong to two series differing from of old, which for instance have still been preserved separately in Hittite (-hi, -hi, -hi, -hi, -hi, -hi). Moreover, this would postulate a development hi20 > hi20. It is very difficult to furnish proof of Kurylowicz' interpretation, and discussion of it here would take us too far; I may refer to Kurylowicz, hi21 and hi33 (1932) 1-4, and hi41 and hi52 (1932) 29-39; Safarewicz, hi61 internat. hi62 (1932) 29-39; Safarewicz, hi63 (1932) 1-4, and hi63 (1932) 29-39; Safarewicz, hi64 (1932) 29-39; Safarewicz, hi65 (1932) 29-39; Safarewicz, hi66 (1932) 29-39; Safarewicz, hi66 (1932) 29-39; Safarewicz, hi67 (1932) 29-39; Safarewicz, hi68 (1932) 29-39; Safarewicz, hi69 (1932) 29-39; Safarewicz, hi70 (1932) 29-39; Safarewicz, hi71 (1932) 29-39; Safarewicz, hi72 (1932) 29-39; Safarewicz, hi73 (1932) 29-39; Safarewicz, hi74 (1932) 29-39; Safarewicz, hi75 (1932) 29-39; Safarewicz, hi76 (1932) 29-39; Safarewicz, hi77 (1932) 29-39; Safarewicz, hi78 (1932) 29-39; Safarewicz, hi79 (1932) 29-39;

Group 3 therefore disappears entirely, i.e. a does not occur in a single ending.

Hirt ($Idg.\ Gr.$, 2, p. 24), rightly points to the importance of the ablaut phenomena in this context. He finds an interchange ai/i, au/u, ar/r etc., and concludes that a was a "fundamental vowel", just like e. If his material is considered, it is seen that here too (naturally) a large amount is confined to the beginning of the word (type αίθω: iθαρός), and some of the etymologies are outdated (such as the explanation of λαγχάνω: λαχεῖν from *langh-/lngh-). Only a very small portion remains (e.g. δαίομαι: Skt. diti- 'the dividing'; infra). Hirt also assumes an interchange a/zero (p. 27; ἀπό: *pŏ-, ago: gero), parallel e/zero.

Recently the problem has been dealt with in more detail by Kurylowicz, *Apophonie*, pp. 174-195, who has assembled the material.

Kuryłowicz disclaims an ablaut a/o. He explains the interchange ai/oi by assuming that oi has been based on i, the zero grade of ai, after the connection between ai and i was broken (pp. 185, 187). This seems inadequate to me. For instance, it may be asked why ei was not formed on i, but only oi. In part this idea is a necessary consequence of the fact that he assumes that $\hbar_2 o$ became a and $o\hbar_2 \bar{a}$. For as a result the possible explanation $\hbar_2 ei > ai$, $\hbar_2 oi > oi$ ceases to apply. Consequently for him the type ἄκρις: ὄκρις (in general, therefore, a/o) remains unexplained (p. 186).

Kuryłowicz gives a list of words (in Indo-Iranian and the European languages) beginning with a and arrives at a total of 25. It may of course be asked whether this list is exhaustive, but an examination of this lies beyond the scope of this book. As regards the words with a in the middle of the word, he rightly makes a distinction between those occurring in both the European languages and Indo-Iranian, and those that are confined to the European group. Of course the possibility can in no way be excluded that a number are not known in Indo-Iranian only by chance or were displaced from this linguistic group by other words. The latter group comprises 22 words, which relate to fauna (κάπρος, ταῦρος, cattus), flora (salix), husbandry (faba, far, napurae), nature of the soil, etc. (lacus, saxum, ἄλςθ2), expressive words (carinare, καυνός: κακός, λαιός, faber (OCS dobr3)), two more 'personal' (barba, δάκρυ)63 and a few others (κάμπτω, mālus etc.). As Meillet (op. cit., p. 167) and Kuryłowicz (p. 194) remark, these are "mots isolés", "termes concrets et immotivés", i.e. words that

However, this word is also found in Armenian (al(t)) and Tocharian (B sālyiye).

But in many respects this word is an anomaly; see for instance Frisk s.v.

cannot be connected with other IE words (i.e. that have no IE etymology as etymon, as for instance ἐρετμόν, remus— ἐρέσαι, ποιμήν—πῶυ, ἄνεμος—ániti), "et, par là même, suspects d'être des emprunts". Nor does one find any trace of ablaut here. The idea that a large number of these words have been borrowed from a European substratum language becomes all the more probable when it is borne in mind that in the names of European rivers studied by Krahe the a is by far the most common vowel. See merely the list in *Sprache und Vorzeit*, p. 58. The conclusion is therefore rather that we are concerned here with non-IE words. See for instance the criticism given by Scherer, Kratylos 1 (1956) 8 f.

Of the words with a not at the beginning of the word occurring in both the European languages and Indo-Iranian, Kuryłowicz does not include onomatopoieas, expressive words (καχάζω, γαγγαίνω, βάρβαρος, λαλέω) and words from children's language (τάτα, ἄττα, μάμμα) in his list (p. 190 ff.). There then remain some thirty (of which various etymologies are disputable). In general this list displays the same picture as the preceding one: no words occur in it that belong to the "vocabulaire fondamental", no prepositions, pronouns, numerals, names of parts of the body; there is, however, one name for a relative, *daiuer- ($\delta \bar{\alpha} \hat{\eta} \rho$). For the "mots d'infirmité" (like caecus), see Haar, Lingua Posnaniensis 3 (1951) 68 ff. with lit. This is all the more evident when these words are compared with those of which a is the first phoneme, including $\alpha\pi\delta$ ἀντί αδ (ἀνά?) and widely ramified roots like *anĝh- (ἄγχω), *ank- (ἀγκών), *aĝ- $(\mathring{\alpha}\gamma\omega)$, *anə- $(\mathring{\alpha}$ νεμος), *ar- $(\mathring{\alpha}$ ραρεῖν), *ar \mathring{g} - $(\mathring{\alpha}$ ργυρος), *a \mathring{k} - $(\mathring{\alpha}$ κρος), *aug- $(α\mathring{\upsilon}\xi\omega)$. A further point is the small number in comparison with a as initial phoneme, 30 compared to 25, while it might be expected that the first figure would be a multiple of the second. Besides *daiuer- *saus- is the most convincing case, because it displays ablaut, αδος, Lith. saũsas, Skt. śúska- 'dry'.

Here one must bring in the results of the laryngeal theory, which so far has been used only to demonstrate that the endings stated have no PIE a. If it is assumed that PIE had a phoneme h_2 that coloured following (and preceding) e to a, it is probable a priori that a number of cases of a at the beginning of the word go back to $\hbar_2 e$. If one is not prepared to regard ablaut ai/i etc., a/o and a/zero as an argument for laryngeal, there still remain the cases avrí (Hitt. hanti, although *hanti cannot yet be excluded here), αὐδή, αὐλή, αὔξω, ἀλκή, ἄχος and ἀλέσαι, ἀρέσαι, ἀρόσαι (the latter moreover with Attic reduplication). It may therefore be regarded as certain that $\hbar_2 e^{-} > a^{-}$ occurred. But in the middle of the word, too, a can be explained by h_2 : Lat. caedo, Skt. khidati would point to * $kh_2(e)id$ -, Kuryłowicz, ibid., p. 189, and Etudes, p. 65 (* dh_2 -ei- etc.). The timbre a in the word may also have been caused by h_2 in quite a different way. Gr. δαίομαι, Skt. dáyate, dáti-, dití- gives the stem forms *dai-, $d\bar{a}$ -, $d\bar{a}$ -. The root here was therefore *de \hbar_2 - (> $d\bar{a}$ -; zero $d\hbar_2$ > Skt. di-), with enlargement $i *de\hbar_2 - i$; the form dai- must have developed anteconsonantally (cf. δαίς δαιτός) from * deh_2iC -. The laryngeal remains a consonant in this position of the group eHR, while the sonant has vocalic function (eHR); the laryngeal then falls intervocalically (i.e. without lengthening; the explanation of *dai- from * dh_2i - is incorrect; this form would have given di-, Skt. dhi-). This is not the place further to investigate the correctness of these explanations for the various forms; what is important is that in principle two explanations of a in the middle of the word are possible (i.e. Ch_2eC - and Ceh_2RC -).

The laryngeal theory therefore makes it probable that, at least in a number of words, a at the beginning of the word developed from $\hbar_2 e$ -, while in the middle of the word too the timbre a may have been caused by \hbar_2 .

Summarizing, one therefore concludes that PIE a occurs in a number of expressive words, some from children's language, in words which look like loan words, and in the remaining cases has partly come into being through a laryngeal. Now that we have arrived at this point the question is no longer whether one may expunge the a as PIE phoneme on the strength of these facts, but rather whether one has the right to posit such a phoneme. For this question the following considerations are in my opinion decisive:

- (1) the a has not the slightest morphological function in PIE; it does not occur in a single suffix or ending. (Here, for instance, one can compare the European substratum language, where the suffixes -ar, -an, -am are very frequent; this seems a better interpretation than that of Krahe, who frequently works with roots like al(a), ar(a), av(a) and sees in the suffixes IE -ro- $/r\bar{a}$, -nt- etc..)
- (2) The ablaut a/o is found at the beginning of the word, never in the middle. Not only is an ablaut a/o a new, separate assumption (beside the existence of the phoneme a); in addition this does not explain why it does not occur in the middle of the word. (If, on the other hand, one assumes that a- is based on $\hbar_2 e$ -, then no new assumption is required for the ablaut, because $\hbar_2 o$ becomes o-.) The same applies to the interchange ai/i (i.e. $\hbar_2 ei/\hbar_2 i$ -) etc. and a/zero ($\hbar_2 e-/\hbar_2$ -; the latter not in Greek).
- (3) The fact that a occurs at the beginning of the word just as much as in the middle, while one might expect that the latter was much more frequently the case: a at the beginning of the word is therefore unexpectedly frequent.
- (4) The fact that the words with a in the middle of the word do not belong to the "vocabulaire fondamental" (unlike, for instance, those with a at the beginning of the word), which renders it probable that these are loan words. (Here one can adduce *daiyer- and *saus- as counter-arguments. For *saus- the explanation *s \hbar_2 -eu-s (zero *s \hbar_2 us- in Skt. śúṣka-) is possible.)
- (5) The fact that for various cases it can be demonstrated than the timbre a came into being through h_2 .

In my opinion the conclusion is that a was admittedly present in the oldest phase of PIE accessible to us, but with a very minor functional load. From the fact that this sound has no morphological function in the linguistic system, one may further conclude that there was a phase during which this phoneme did not occur at all (except perhaps in special strata, such as children's language, affective language, etc.). An original ablaut a/o, a/zero or ai/i etc. never existed (except when a came into being through laryngeal). This book will proceed on these assumptions in the following.

As allophone of e, a existed in the direct vicinity of \hbar_2 . When the laryngeal disappeared this a-colouring was preserved in opposition to the original e, so that the allophone became an independent phoneme (which coincided with the a in a small number of loan words, words from children's language, etc.). As this a corresponds exactly in various European languages and is distinguished from e and o, this colouring was probably already present in the proto-language. However, the disappearance of the laryngeal at the beginning of the word cannot have taken place until the independent languages, since Hittite h postulates its survival.

Protests have been uttered against the picture that forms in this way of the oldest PIE, for instance by Leumann, *Kratylos* 1 (1956) 29: "Wenn sich hierbei der frühidg. Vokalbestand auf den einzigen Vokal e reduziert, dem eine Grosszahl von Konsonanten gegenübersteht, so wird man wohl kaum andere Parallelen finden als solche von rekonstruierten Sprachen; hier überall ist eigentlich nicht eine Grundsprache gesucht, sondern eine mathematische Ordnung von höchster Einfachheit".

The objection to the mathematical procedure is in my opinion not a fair one. At this level, where an attempt is being made to reconstruct pieces of a vanished language, a systematic approach which may seem mathematical (algebraic) is the only possible one. It may be argued that this is not reliable enough to allow of conclusions, but that is no argument for defending an opposite point of view (i.e. the existence of the phoneme a). There is, of course, the danger that, through the continuous elimination peculiar to historical linguistic reconstruction, an over-simplified picture results. For instance, in the field of phonetics merger of phonemes in the basic language can never be demonstrated now. However, this objection holds good for historical linguistic comparison as such. The only conclusion that may be drawn from this is in my opinion that it is not possible to establish the phonemic system of the basic language, at least for a period preceding the last phase before the division. But here we are not going further back than this last phase. In my view the procedure in no way differs from that in other fields of IE linguistic comparison.

The key point is of course the unusual picture of a language with one vowel. However, languages with a similar phonemic system are found in Caucasian. In Kabardian, for instance, A. H. Kuipers (*Phoneme and Morpheme in Kabardian*) finds 48 consonants, while he disclaims the existence of a vocalic phoneme. Ignoring the question of whether there was one or no vocalic phoneme, this is still a striking parallel of the system constructed for PIE. The bizarre aspect cannot therefore form an argument.

Incidentally, it is incorrect to speak of one vowel. The PIE phonetic system can well be compared with old Indian.

(N.B. The following scheme therefore gives a comparison of phonetic systems, not a survey of the historical development from PIE to Indian.)

			PIE							SKT			
		е		0 ¹					a			ā	
								e		0			
		i/į		u/u̯				i/y		u/v		ī	ū
r/ŗ		1/1		m/m̥		n/ņ	r/ŗ		$1/1^{2}$	m	n	$\mathbf{\bar{r}_{3}}$	
	\hbar_1/\hbar	1	\hbar_2/\hbar_2	2	ក្₃/ក្នុំ₃	3			h				
			S					ś	\S^4	S			
	k	g	gh						k	kh	g	gh	$\dot{\mathbf{n}}^{5}$
	ƙ	g êg	ĝh						С	ch	j	jh	$[\tilde{n}]$
	k^{u}	$\mathbf{g}^{\mathbf{u}}$	$g^{\mathbf{u}}h$						ţ	ţh	d	фh	$\dot{\mathbf{n}^5}$
	t	d	dh						t	th	d	dh	
	p	b	bh						p	ph	b	bh	

[] allophones.

As the phonetic systems are not entirely parallel, such a systematic comparison presents difficulties. For instance, it seemed more logical to put the consonantal sonants on a par, which, however, disturbed the traditional picture of the Indian phonetic pattern (through the occurrence of the gap in the nasal series). It may be wondered also with what right the Indian h has been put on a par with the laryngeals.

In my opinion it may not be stated that PIE — according to the laryngealistic reconstruction without a — had fewer vowels than Indian. PIE thus finds its vowels beside the e and the o in the vocalic sonants. (One wonders, of course, just what the historical development was here. If r etc. originally occurred only in the zero grade and all zero grades came into being as the result of the action of stress (from original full grade), it is obvious to conclude that there was a stage in which r etc. did not exist and e was in fact the only vowel (assuming that the o also came into being as an allophone of e). But this stage lies beyond what is attainable by reconstruction and must therefore remain out of consideration.) PIE thus had eleven phonemes that could have a vocalic function, and the same number is found for Indian (seven vowels

⁶⁴ Cf. Hirt, Idg. Gr., 2, p. 23: "Es ist also die Lehre von dem einheitlichen indischen a sozusagen beibehalten, nur dass man für a jetzt e sagte." However, the view of the historical development is an entirely different one.

Pedersen, Linguistic Science in the Nineteenth Century (1931), p. 284, n. 2, also remarks that the one vowel can be just as well indicated by a, and that the allophones (i.e. e/o) could then suitably be indicated as \ddot{a}/\ddot{a} . However, in view of the trend of the research, this is not to be recommended, since it could give rise to confusion. The representation e in the historical languages also advocates e as symbol for the reconstructed phoneme.

It is possible that the ablaut o developed in certain circumstances from e and thus was originally an allophone of e. However, in the stage attainable by comparison e and o were phonemes. (For a supposed non-ablaut o see below.)

² This allophone occurs only in four forms of the root klp- (AiGr., p. 34). The l is simply a grammarians' construction.

³ For the functional burden of \bar{r} see AiGr., p. 34.

Largely an allophone of \dot{s} , \dot{j} and \dot{s} .

⁵ Largely an allophone of n.

and four sonants). Moreover, the reduced vowel, which was an independent phoneme of PIE, has not been included.

If one considers the history of the research, one may say that the discovery of the laryngeals sealed the fate of the a. However, the place of the a and the a was taken by three other phonemes that could have a vocalic function.

It thus seems probable to me that a is based on $\hbar_2 e$ - as an initial phoneme of PIE roots. In this way ἀρ- (ἀραρεῖν), ἀφ- (ἀπαφεῖν), ἀχ- (ἀκαχεῖν) would be based on $*\hbar_2 er$ -, $*\hbar_2 ebh$ -, $*\hbar_2 egh$ -, ἀγρός (Skt. ájra-, Lat. ager, Goth. akrs, Arm. art) on $*\hbar_2 e\hat{g}ro$ -, ἄξων (Skt. ákṣa-, Lat. axis, Lith. ašis, Goth. ahsa) on $*\hbar_2 ek$ -s-, ἄνεμος (Lat. animus, Skt. ániti) on $*\hbar_2 en\hbar_1 mos$. However, there is no point in adding to the number of examples of this, since no further arguments can be adduced.

4. PIE Non-Apophonic o

The laryngeal theory can clarify matters here. For the objection stated does not seem enough to explain all cases. And moreover, if one considers the examples, it is striking that most of them (11 out of the 13 mentioned above) have o at the beginning of the word, which recalls the situation with PIE a, as Martinet remarked in Word 9 (1953) 254 (where he also remarks that an interchange e/o may have been secondarily introduced in roots with originally non-apophonic o). For a few of the cases given ($\delta \iota \iota$, $\delta \kappa \rho \iota \iota$, $\delta \iota \iota$, $\delta \iota \iota$) and further for $\delta \sigma \iota \iota$ $\delta \iota \iota$ and $\delta \rho$ -) laryngeal could be demonstrated; $\delta \iota \iota$ $\delta \iota \iota$ as a prothetic vowel, see p. 46. Together with what was said about PIE a, this leads to the conclusion that in many cases PIE o- came into being from $\hbar_3 e$ -. Here both $\hbar_3 e$ - and $\hbar_3 o$ - became o- (probably, as with a, both coincided in PIE $\hbar_3 o$ -, after which the laryngeal disappeared in the individual languages, in view of Hitt. hastai etc.). The term 'non-apophonic' is therefore correct for this group in as much as the $o < \hbar_3 e$ could not interchange with e, but the term is meaningless.

The form ποιμήν can be explained from * peh_3i -C->* poh_3i C->*poiC-, but * poh_2i -is perhaps more self-evident; cf. p. 168.

For ὄκρις – ἄκρος Brugmann postulated in Grundr., I^2 , p. 485, a separate ablaut a/a,

which is rather improbable. As a was not a PIE phoneme, it is obvious to assume $\hbar_2 o - / \hbar_2 e$ - here. The same applies to o $\delta \varsigma$ — Lat. auris, * $\hbar_2 \delta us - / \hbar_2 eus - / \hbar_2 us$ - etc.?).

Further interpretation of $\pi \acute{o}\sigma \iota \varsigma$ is uncertain. We are concerned here with a single form, so that the absence of ablaut variants is meaningless. There is nothing to prevent us starting from *pot-(i-).

To assume beside the ablaut-o and the o that emerged in the immediate vicinity of \hbar_3 a third (non-ablaut) o does not seem justifiable. The basis for the first non-ablaut o was weak enough in itself, and the forms adduced prove to go back largely to $\hbar_3 e$, so that there is insufficient ground for assuming a third o. This seems to solve this matter as far as I am concerned.

The problem, therefore, with which we were confronted above was the disturbance of the ablaut e/o by the presence of a laryngeal. The situation may be sketched as follows:

without laryngeal	after laryngeal
e/o	$\hbar_1 e/o > e/o$
	$\hbar_2 e/o > a/o$
	$\hbar_3 e/o > o/o$

5. ARMENIAN

Armenian presents two questions which must be touched on. The first is whether non-apophonic o, i.e. h_3e , became a in Armenian. This idea was put forward by De Saussure, Mémoire, p. 96 f. The material was discussed by Bartholomae, BB 17.91-103. After critical sifting (for instance not automatically putting amb 'cloud' on a par with ὄμβρος) he retains ten cases. Of these, the connection haik 'Armenians' —πόσις may probably be abandoned (Boisacq s.v.), that of jaunem 'to consecrate' with χόανος is very uncertain, that of (y)esan with ἀκόνη is meaningless, since -ovη is a Greek suffix that may be secondary (forms of ἀκ- also occur with suffix -αν-, ἄκαινα ἄκανος ἄκανθα, which, however, seem non-IE); arawr—ἄροτρον is based on * \hbar_2 er \hbar_3 trom, see p. 231; atamn and anurj have 'prothetic vowel', see pp. 55 and 46; as Bartholomae himself states, y-areay 'I rise up' (ὄρνυμι) may be explained by the zero grade in pres. yarnem. We then still have akn 'eye' ($\delta \pi$ -), ateam 'to hate' (odium) and aytnum 'to swell' (οἰδέω), to which one could add haci — ὀξύα. Thought has been given to assuming ai/oi ($\hbar_2 ei/\hbar_2 oi$) in aytumn — oldé ω , on the strength of the comparison with Lat. aemidus; o-vocalism may be expected for οἰδέω itself, but the connection with aemidus is of course not sufficiently reliable.

However, as against these examples there are $hoviv < *oui-p\bar{a}-$ (?), oskr 'bone' (octéov), ori 'hawk' (if connected with opvig), ost (oco). In my opinion these show that the Armenian interchange a/o does not go back to PIE. The cause will have to be sought inside Armenian (cf. Meillet, $Esquisse^2$, p. 41).

The second question is whether the Armenian h at the beginning of the word represents an original laryngeal, as Austin suspected; see Winter, *Evidence*, p. 29 f., with literature. I do not believe that much value may be attached to the absence of Arm. $he < h_1e$ -, in view of the fact that h_1 is very difficult to demonstrate. In my opinion a glance at the examples stated above shows that the whole idea is untenable. A recent discussion of the Armenian h may be found in Jerejian, Word 9 (1953) 146-51.

LARYNGEAL AT THE END OF THE WORD

In general the difficulty in this section on laryngeal at the end of the word is that there is little material here. Whilst in the first section on laryngeal at the beginning of the word the difficulty is demonstrating the laryngeal, and in the third section—laryngeal in the middle of the word — the problem is interpretation of the confusing data (especially in Greek), the proof adduced here is necessarily austere, owing to this shortage of material. This is understandable, because we are concerned here with the cases in which the laryngeal was the last phoneme, i.e. (the last phoneme of) the ending. In the third chapter, moreover, the problem is intensified by the possibility of an explanation with the aid of analogy.

III. AFTER VOWEL

First of all we shall consider the development of laryngeal after vowel, i.e. after e/o (for PIE a see p. 133 ff.). The cases with sonant (i, u; r etc.) followed by laryngeal will be discussed in chapter V.

One of the starting-points of the laryngeal theory is that the long vowels of the basic language which did not arise from lengthening or contraction go back to short vowel plus laryngeal. Various long vowels at the end of the word must also be so explained, e.g. the feminines ending in $-\bar{a}$ (cf. p. 170) and (Skt.) $-\bar{i}$, $-\bar{u}$ from $-e\hbar_2$, $-i\hbar_2$, $-u\hbar_2$ respectively. Kurylowicz' explanation of the ending of 1 sg. act. of the thematic presents $-\bar{o}$ from $-o-\hbar_2$ may also be recalled; see p. 133 n. 61.

A phenomenon that is explained by this assumption is the rule *vocalis ante vocalem corripitur*. For if a word ending in vowel plus laryngeal stood before a word beginning with vowel, in the context the laryngeal would come to stand between vowels and would disappear, $-VH\ V->-VHV->-VV-$ ($-e\hbar_2\ o->a\hbar_2 o->-ao-$). The long vowel at the end of the word thus occurred at first only before a word that began with consonant ($-a\hbar_2 C->-\bar{a}C-$).

Kuiper has demonstrated that the Rigveda still displays traces of these sandhi phenomena (India Antiqua, p. 208 ff., Shortening, Die Sprache 7.16-20). It thus emerges from this that the laryngeals were preserved in this position down to the separate languages, for it is improbable that these sandhi rules were preserved for centuries (from the phase in the proto-language in which the laryngeals were thought to have disappeared here to the time when the Vedas were composed). It proved that in pause too the forms ending in short vowel occur. The origin of the long vowels is based on compensatory lengthening, as a result of which the length of the syllable was preserved, whereas on the other hand a closed syllable in pause was short. The latter shortening (for it was as such that the phenomenon was regarded in the later linguistic system, in which the forms with long vowel were generalized) is found for example in the vocative, which after all is by nature followed by a pause; cf. Kuiper, India Antiqua, p. 210, and Shortening, p. 253 n. 1: "In Sanskrit the vocative often remains unaffected by the rules of sandhi and the verb which follows a vocative at the beginning of a sentence is accented as though it were the first word". Thus in the Rigveda shortening can be demonstrated for the instr. sg. ending in $-t\bar{t}$, the gerunds in $-y\bar{a}$, $-ty\bar{a}$, the neuter pl. in $-\bar{i}$, $-\bar{u}$, $(-\bar{a})$ and the nom. acc. dual in $-\bar{i}$, $-\bar{u}$; shortening in the vocative is found in words ending in $-\bar{\imath}$, $-\bar{u}$ and in the dual of the a- and i-stems (no example is known of the u-stems).

In the oldest Greek, i.e. in Homer, no trace can be found any longer of these sandhi phenomena. The more frequent form has already been generalized here, i.e. the anteconsonantal form. However, the shortening in the vocative can still be shown; it is discussed below.

The \bar{a} -stems therefore have $-\bar{a}$ from $-a\hbar_2 < -e\hbar_2$. Indications of the laryngeal are the form of the vocative (*infra*), the declension (p. 170) and the parallelism with the Sanskrit forms ending in $-\bar{i}$, $-\bar{u}$, which have to be explained as $-i-\hbar_2$, $-u-\hbar_2$.

The endings which we find for the instrumental — if we ignore here the forms with bh and m — point to a laryngeal. The endings Ved. $-\bar{a}$ (with stems ending in consonant, -a and $-\bar{a}$) and $-\bar{i}$, $-\bar{u}$ (with i- and u-stems) (other forms are more recent, taken over in part from the pronominal declension, AiGr. 3, pp. 34-6, 90-2, 115-9, 145-8) suggest an analysis -i- \hbar , -u- \hbar , and $-e/o\hbar$ for the o-stems. This interpretation is now confirmed by the above-mentioned shortening in pause and before vowel in the Rigveda of $-t\bar{i}$, $-ty\bar{a}$ and $\pm \sin i$ (Kuiper, Shortening, p. 253-64). In this way the acute of Lith. $-\dot{u} < -\delta (vilk\dot{u})$ 'with the wolf') also becomes clear, indicating that no contraction has taken place here (unlike the ablative ending in $-\vec{e}d/-\vec{o}d$, see AiGr. 3, p. 94f.). In Greek one still finds the acute in $\pm i$ $\pm i$

The situation is more complicated with the \bar{a} -stems, where $\kappa \rho \nu \phi \tilde{\alpha}$ (Pi.) and the like (Schwyzer, p. 550) have circumflex, insofar as value may be attached to this, because $-\eta$, $-\omega$ also were often given circumflex. Nor is it clear whether the ending Skt. $-\bar{a}$ is original with the consonant stems. If this is the case, both questions can be solved (for in origin \bar{a} -stems are also consonant stems, $-\bar{a} < -e\hbar_2$) by assuming an ending $-e\hbar$, beside $-\hbar$ with the stems ending in vowel; for the \bar{a} -stems this gives $-e\hbar \rho_2 -e\hbar \rho_3 -e\hbar \rho_2 -e\hbar \rho_3

That Ved. $-\bar{a}$ of the o-stems stands for IE $-\bar{e}$ emerges from forms like Skt. paścā, Av. paścā 'behind' $<*posk\bar{e}$ (where the palatal points to \bar{e}) as against the abl. Av. paskāt $<*posk\bar{o}d$ and from the comparison with the other languages (AiGr. 3, p. 91f., Schwyzer, p. 548). The long \bar{e} is found in Goth. $b\bar{e}$ 'all the more', $b\bar{e}$ 'with which' (OS $bw\bar{o}$ with \bar{o}) and perhaps Latin adverbs ending in $-\bar{e}$, cert \bar{e} , etc. From elsewhere we know only $-\bar{o}$, Lith. vilkù, OHG wolfu. That the $-\eta$ of some Greek forms does in fact represent \bar{e} is demonstrated by the Doric forms. Laconian $\pi \hat{e}(\pi o \kappa a)$ cannot be $*k^u e \hbar_2 - \hbar$ (with the second \hbar as instrumental ending), because the η instead of the \bar{a} then to be expected could not be explained. It is evident that the opposition η : \bar{a} here has been sharply preserved from the context of Lac. $\pi \hat{e}\pi o \kappa a$, IG IV 1.213, 3-5, (Buck Gr. Diall., p. 268), Sparta V B.C.: $v \kappa \hat{a}h \alpha \beta$ | $v \alpha \nu \hat{a}$ | $v \alpha \nu \hat{$

corresponding forms with -ω (e.g. πώποτε), compare $\tilde{\omega}$ ς $\tilde{\omega}$ δε with Myc. *jo*- (o-; for instance *jodososi* 'jō dōsonsi') and see Schwyzer, p. 550.

This interchange $-\bar{e}/-\bar{o}$ can only be explained by $-e-\hbar_1/-o-\hbar_1$. It therefore follows from this that the instrumental ending was \hbar_1 .

The shortening in the Rigveda shows that the ending of the nom. voc. acc. dual of o-, i- and u-stems was a laryngeal too. The acute of Lith. $-\dot{u}$ also suggests this. It is difficult further to determine this laryngeal. The consonant stems point to an ending -e, the \bar{a} -stems to an -i, contracted to $-ai < -e\hbar_2$ -i, and the neuters to -i. These cannot be linked with laryngeal and therefore do not give any support here. The occurrence of $-\bar{o}$ only (Gr. $-\omega$, Lith. $-\dot{u}$; Skt. $-\bar{a}$, OCS -a) suggests \hbar_3 , but if the stem vowel was o, each of the three laryngeals is possible. However, $\delta\dot{\omega}$ ($\ddot{\alpha}\mu\phi\omega$) and $\dot{\alpha}\kappa\dot{\omega}$, which probably have a dual ending, would confirm the \hbar_3 . One could then regard $\delta\dot{\omega}$ 0 as shortening before vowel and in pause, but this cannot be demonstrated (one would expect the same interchange with $\dot{\alpha}\kappa\dot{\omega}$, but this perhaps is less frequent). Then there are the forms with -u, $*du\bar{o}u$, Skt. $dv\dot{a}u$ and Myc. duwoupi (not *duojunphi with Docs. No. 148, since $-\phi t$ was used only after the stem, Chantraine, Gr. Hom., pp. 234-41 and 499-51). This question therefore remains open.

In *pro too a \hbar_3 cannot be further demonstrated. Martinet's theory, Word 9 (1953) 253-67 ($e\hbar_3 C > \bar{o}C$ as against $e\hbar_3 V > \bar{a}uV$) is unacceptable.

a. The Vocative Ending in -a

Besides the vocatives of the feminines ending in -i and -i demonstrated in Vedic one would expect an ending -i ($<-a\hbar_2$) of the \bar{a} -stems. However, there is no evidence at all of this in Indian. It is true that forms are found like *amba* which, however, corresponding to Greek $\dot{a}\mu\mu\dot{a}$, $\ddot{a}\tau\tau a$, are entirely outside the ordinary declension system as words from children's language. Moreover, it is supposed that $amb\bar{a}$ $akk\bar{a}$ $att\bar{a}$ ('mother') were borrowed from a Dravidian language; see Mayrhofer s.vv. The vocative ending in Indo-Iranian is -ai, which has not yet been adequately explained. ⁶⁵

However, the expected ending $-\ddot{a}$ in the vocative is found in other languages, including Greek, and further in OCS -0 ($\check{z}eno$, nom. sg. $\check{z}ena$) and Umbr. -a (in proper names, e.g. Prestota) as against a nom. ending in -0, -a, -u.⁶⁶

In Greek (Schwyzer, p. 560 and Chantraine, Gr. Hom., p. 199 f.) one finds only traces of the vocative ending in $-\ddot{a}$ in the feminines, in Homer νύμφα (Γ 130 δ 743) and a few forms in Sappho, which are also said to be used as nominative. Here one quotes (Schwyzer, p. 558 Zus. 1.; recently Chantraine, Morph., p. 49) Δίκα Εἴρανα ἔραννα. According to the index of Lobel-Page the last form occurs only in the

The connection with γ 0 α 1 is untenable. Viewed from Greek, this is the normal vocative consisting of the stem * γ 0 α 1. It is highly improbable that the vocative would function as stem; the use of vocatives as nominatives to be discussed later is not at variance with this, since we are concerned here with specific artificialities of the epic (and perhaps religious) language; Lat. *Iovis* etc. does not give sufficient support for this assumption either. Incidentally, in that case the same would have had to have happened in Armenian (*kanay*-). This is already mentioned in Brugmann, *Grundr.*, II², p. 135.

⁶⁶ Bold face indicates transcription of Umbrian script.

accusative (ξρανναν Fr. 132). The forms Δίκα, Fr. 81(b), cf. 82(a), Εἴρανα Fr. 91, 135 occur only as vocative. Hamm's grammar, p. 147 § 223, also gives them simply as such; the nominative of the \bar{a} -stems is not stated there separately. Consequently in my opinion there is no ground for the assertion that these vocatives are used by Sappho as nominatives.

In the case of the masculine \bar{a} -stems (which acquired an -s secondarily in the nominative in Greek) the vocative ending in - $\bar{\alpha}$ is frequent, e.g. τοξότα (Λ 385), συβῶτα (ξ 55). This is very widespread in Homer, Chantraine, Gr. Hom., p. 200; for Attic see Kühner-Blass, I^2 , p. 387.

Inscriptions give nominatives ending in $-\alpha$, Boeot. δλυμπιονικα, El. τελεστα (Schwyzer, p. 560 β), but it cannot be made out whether the $-\alpha$ here is long or short (Chantraine, *Morph*.², p. 54). It is therefore not clear whether these forms must be linked with what is under discussion here.

A special problem is formed by a small group of these words in Homer, a specific problem of Homeric language.

This group consists of ten forms that are used as nominatives. Only three are also found as vocatives, and in the case of two of them the nominative ending in $-\eta \zeta$ also occurs; three are $\ddot{\alpha}\pi\alpha\xi$ $\lambda\epsilon\gamma\dot{\alpha}\mu\epsilon\nu\alpha$ (to which one may probably add $\dot{\alpha}\kappa\dot{\alpha}\kappa\eta\tau\alpha$; infra). The forms are the following:

```
εὐρύοπα
                    voc. \Pi 241; nom. Il. 9 times, Od. 7 times; acc. Il. 6 times.
μητίετα
                    voc. A 508; nom. Il. 14 times, Od. 3 times.
κυανοχαῖτα
                    voc. O twice, \iota; nom. N \Xi; (-\eta \varsigma Y \iota; -\eta Y \gamma).
νεφεληγερέτα
                    nom. Il. 22 times, Od. 8 times (gen. -αο Il. 6 times).
ίππηλάτα
                    nom. Il. 9 times, γ twice [-ας A.]
ίππότα
                    nom. Il. 26 times, \gamma 9 times, \delta [-\eta \varsigma S.]
ἀκάκητα
                    nom. Π 185 ω 10
στεροπηγερέτα nom. Π 298
αίχμητά
                    nom. E 197 (-\eta \varsigma \Gamma P \beta; -\eta, -\eta v, -\bar{\alpha} (du.), -\alpha \iota, -\alpha \omega v)
ήπύτα
                    nom. H 384.
```

All are epithets of gods and heroes, except ἠπότα κῆρυξ (fin.). Εὐρύοπα, μητίετα, νεφεληγερέτα, στεροπηγερέτα are connected only with Zeus, κυανοχαῖτα with Poseidon (or γαιήοχε or independently to designate Poseidon), ἀκάκητα with Hermes. This suggests that this usage has its starting-point with the names of gods. With regard to heroes one finds αἰχμητά, a ἄπαξ, but a very ordinary word that occurs in many other forms; further only ἱππηλάτα and ἱππότα, in themselves very frequent words, of which, however, the nominative ending in -ης was metrically impossible; ἢπύτα κῆρυξ is the last step in the "profaning" of this use of the forms ending in -ἄ (derived directly from ἠπύω). On the other hand, the epithets for gods are all words that are otherwise not known, mostly compounds, whose meaning is often not known to us exactly. Risch, Sprachgesch. u. Wortbed., pp. 389-97, assumes that Γερήνιος ἱππότα Νέστωρ (30 times) is older than the metrical variant γέρων

ίππηλάτα Πηλεύς (4 times): where Γερήνιος was not applicable it was replaced by γέρων and therefore $i\pi\pi$ ότα by $i\pi\pi$ ηλάτα on behalf of the metrical structure. Further, αἰχμητά would go back to this formula, having regard to the resemblance of E 197 and I 179, and $\mathring{\eta}\pi$ ύτα on account of that between H 383 f. and I 52 (cf. the phonetic structure $\mathring{\eta}\pi$ ύτα — $i\pi\pi$ ότα and Hes. Op. 582 $\mathring{\eta}$ χέτα τέττιξ; κ $\mathring{\eta}$ ρυκι \mathring{H} πυτίδ $\mathring{\eta}$ P 324 would be based on $\mathring{\eta}\pi$ ύτα).

It has been postulated that this was an old nominative ending in $-\tau\alpha$ (see the lit. in Schwyzer, p. 560 α). In that case the $-\alpha$ would have to go back to PIE $-\partial$ and was compared with Skt. $m\acute{a}r-\bar{i}c-i$ 'ray of light', which is said to have -i from $-\partial$. But, as $-\bar{i}c$ - developed from $-i-\hbar_3k^u$ - (with the same root as $\partial\pi$ - 'to see'), the ending must be an old i, because $i < \partial(\hbar)$ did not palatize; see the Introduction, p. 9.

Meillet believed it to be an interchange \bar{a}/∂ ($e\hbar_2/\hbar_2$) (Introd.⁸, p. 319). However, this is improbable, because there is no trace of ablaut in \bar{a} -stems (with the apparent sole exception of $\mu \acute{e} \gamma \alpha$, see p. 153).

The hypothesis of the nominative ending in $-(\tau)\alpha$ also does not explain why this was preserved precisely in the case of a few epithets of gods, while it is understandable that the form in which they were invoked became a noun. This idea was latterly defended by Risch (loc. cit.). That old forms were preserved in the invocation of gods is evident from Russ. bože, Gr. Zeõ äva (Γ 351 Π 233 ρ 354; cf. Leumann, Hom. W., p. 39 f.). Lat. Iuppiter is not only the sole vocative without ending of the third declension (Sommer, Hb., p. 374; *Dieu ph2ter = Zeõ πάτερ as against nom. *Diēus ph2ter), but was also used as nominative of and formed the starting-point for a new declension (Iovis etc., from *Dieu-es, instead of PIE *Diuós etc.). It becomes probable that we are concerned with a vocative in these forms by the use of κυανοχαῖτα. It is found in the following places:

- Ο 174 άγγελίη τινά τοι, γαιήοχε κυανοχαῖτα
 - 201 οὕτω γὰρ δή τοι, γαιήοχε κυανοχαῖτα
- ι 528 κλύθι, Ποσείδαον γαιήοχε, κυανοχαΐτα
- Ν 563 κυανοχαΐτα Ποσειδάων, βιότοιο μεγήρας
- Ξ 390 κυαναχαῖτα Ποσειδάων καὶ φαίδιμος "Εκτωρ
- ι 536 ως ἔφατ' εὐχόμενος, τοῦ δ' ἔκλυε κυανοχαίτης
- Υ 144 ως άρα φωνήσας ήγήσατο κυανοχαίτης
- γ 6 ταύρους παμμέλανας, ἐνοσίχθονι κυανοχαίτη
- Υ 224 ἵππφ δ' εἰσάμενος παρελέξατο κυανοχαίτη

It seems that the formula of ι 528 is the oldest one, from which on the one hand that of O is derived, and on the other hand, with the vocative as nominative before Ποσειδάων, that in N and Ξ (both γαιήοχε and the name Ποσειδάων are found together in self-evident fashion in ι 528, and in ι too one finds the nominative with the normal ending -ης; ππω in Y displays the continuing "profaning").

⁶⁷ An older nominative is *Diespiter*; $di\bar{e}s$ has the \bar{e} from the accusative * $di\bar{e}m$ (for this form see p. 174.) and i from the weak cases (*diyos), and possibly also from sandhi, after consonant in accordance with Sievers' Law.

Εὐρύοπα is a special case, which has to be considered separately. If we compare the places, we find that εὐρύοπα Ζεύς occurs nine times in the *Iliad* and seven times in the *Odyssey*, always at the end of the verse. Six times it is found as accusative in the *Iliad*, namely Θ 206 Ξ 265 Ω 331 with εὐρύοπα Ζῆν at the end of the verse and A 498 O 152 Ω 98, which verses began with εὖρεν (-ον) δ' εὐρύοπα Κρονίδην. Besides εὐρύοπα Κρονίδην, the form εὐρύοπα therefore occurs exclusively at the end of the verse, followed by a form of Zεύς (20 times). We are thus concerned here with a formulaic group of words that originally stood at the end of the verse (the most conservative part). The placing at the beginning of the verse was therefore an innovation. Coupled with this was the replacement of Zῆν by Κρονίδην, evidently to avoid the strange form Zῆν; with Zῆν word end would also fall at a forbidden place (after the sixth element).

Although it is possible to assume here too that an old vocative is the startingpoint, the interpretation generally accepted (see the lit. in Frisk and Risch, *loc. cit.*) that ευρύοπα Zῆν is the older formula is nevertheless more probable. In that case Zῆν is the direct continuation of PIE *Diēm; after all, it cannot be assumed that the form Zῆν was created for the sake of the metre. The form is thus further irrelevant here. (As regards the vexed question of whether the word contains the root οπ- 'voice' or 'to see', the following may be said. In my opinion ευρυ- points more to 'to see' than 'to speak'. The form cited in this context, βαρυόπαν (Pi. P. 6. 24), where οπ- clearly means 'voice', exactly does not have ευρυ-. Incidentally, it is the question whether much value can be attached to this word for the original meaning of ευρύοπα. The same concept 'widely surveying' is found in Ved. uru-cakşas- (of Varuna, Mitra and Agni) and Av. vouru-casāni- (of Ahuramazda), in which uru-, vouru- is etymologically cognate with ευρν-; see R. Schmitt, Idg. Dichterspr., p. 128 f.)

Everything therefore suggests that the derivation given by Brugmann (MU 2, p. 199 f.; Grundr., II² 1, pp. 416 f.) of these forms ending in - α from the vocative is correct. This impression is confirmed if a number of other similar words are compared that occur as vocative:

E 31 = 455	Άρες Άρες, βροτολοῖγε, μιαιφόνε, τειχεσιπλῆτα
Γ 3 = N 768	Δύσπαρι, είδος ἄριστε, γυναιμανές, ἠπεροπευτά
Λ 385	τοξότα, λωβητήρ, κέρα ἀγλαέ, παρθενοπῖπα
A 159	τιμὴν ἀρνύμενοι Μενελάφ σοί τε, κυνῶπα

For Π 31 αἰναρέτἄ (?) see Chantraine, Gr. Hom., p. 200.

These forms also show that they stood in pause, often at the end of the verse too, not before the word to which they related, as also appeared with κυανοχαΐτα. Compare for the placing Π 233 Ζεῦ ἄνα, Δωδωναΐε, Πελασγικέ.

Comparing these Homeric forms with the vocative ending in $-\ddot{a}$ in Old Bulgarian and Umbrian, one arrives at the conclusion that an old vocative is concerned here, for which the pause shortening in Vedic and the laryngeal theory give the explanation: $-e\hbar_2 > [-a\hbar_2 >]-\ddot{a}$. This is also in accordance with the fact that the vocative consists

of the stem without ending and that the \bar{a} -stems do not have another stem form than $-\bar{a}$ (- $e\hbar_2$).

For the relative chronology it is important to establish that the laryngeal did not disappear here until the separate languages (on account of the sandhi in the Rigveda), but that the general a-colouring indicates that this still took place in the common language; one therefore has PIE $-e\hbar_2$ realized as $-a\hbar_2$, and Gr. (OCS and Umbr.) $-e\hbar_2$ ($[-a\hbar_2]$) $> -\check{a}$.

It is understandable that the nominative always has $-\bar{a}$, and the vocative (also) $-\bar{a}$, although both are sandhi variants of the same form, owing to the fact that the vocative by nature (i.e. always) stood in pause, and the nominative only occasionally before vowel (or in pause). The use of the vocative ending in $-\bar{a}$ as nominative was probably not a development of the living language, although it is possible that it did not belong exclusively to the artificial language of the epic, but also to religious language. The fact that the vocative ending in $-\bar{a}$ was better preserved in masculines than in feminines will be a consequence of the fact that the nominative here differed more clearly from the vocative (masc. $-\bar{a}\varsigma$: $-\bar{a}$, fem. $-\bar{a}$: $-\bar{a}$).

(The objections of J. T. Hooker, *Glotta* 45 (1967) 14-22, to the theory of the old vocative are in my opinion not decisive.)

IV. AFTER CONSONANT

The comparison of the 1 pl. midd. ending $-\mu\epsilon\theta\alpha$ with Indo-Ir. -madhi leads to the reconstruction * $medh\hbar$ (*-medha). It cannot be made out whether this laryngeal was vocalic or consonantal in PIE. On the strength of the comparison with the following (the ending of the neuter plural), where secondary vocalization in the separate languages of an originally consonantal laryngeal is certain, one is inclined to assume that here too the laryngeal was consonantal. As in my opinion the vocalization of \hbar_1 and \hbar_3 in Greek gave ϵ and o respectively, we have here the a-colouring laryngeal, i.e. * $-medh\hbar_2$.

As the ending of the neuter plural a is assumed, i.e. within the laryngeal theory a laryngeal. This conclusion is based on the correspondence of Skt. $-\bar{a}$ (of the a-stems), $-\bar{i}$, $-\bar{u}$ (with the i-, u-stems) and -i (with the consonant stems) with the ending $-\bar{a}$ in other languages, including Greek. It is evident that we are concerned here with a consonantal laryngeal from the interchange $-\bar{i}/-\bar{i}$ and $-\bar{u}/-\bar{u}$ in Vedic (Kuiper, Shortening, pp. 264-78; see the preceding section). H_2 is demonstrated by the α of Greek. In accordance with this is the identification of this laryngeal with the ending of the feminines, which, as emerges from the Sanskrit endings $-\bar{a}$, $-\bar{i}$, $-\bar{u}$, was a laryngeal, and in view of Gr. etc. $-\bar{a}$ was an a-colouring one. Cf. Schwyzer, p. 581 Zus.

After consonant one finds this ending for instance in φέροντα (Skt. bháranti), $μέζω < -osα < -os\hbar_2$, cf. Myc. $mezoa_2$ 'mezoha', γένεα (Lat. genera, Skt. mánāmsi, Av. /manāh/, written $man\mathring{a}$). For the last group the Avestan form points for Indo-Iranian to * $manās-\hbar$, with consonantal laryngeal. ⁶⁸ Cf. the Introduction, p. 8.

This exhausts the material. Only one group may still be of importance here, that of the Greek adverbs ending in -α, κατά ἀνά διά etc., Schwyzer, p. 622,8.

⁸⁸ Burrow's idea, Sanskrit Lg., p. 236, that Sanskrit had a PIE ending -i is based on the Hittite -i. However, Brosman, JAOS, 82 (1962), 63-5, demonstrated that the latter is a Hittite innovation.

p. 519,5): *ἔναρ θέναρ ῆμαρ ὄναρ. I therefore do not believe that this is the right solution.

The view that an instrumental ending -a forms the basis here also seems untenable (this is the view expressed for instance in Meillet, $Introd.^8$, p. 295, besides the literature stated by Schwyzer). It has been shown above that it is improbable that PIE had a phoneme a, or at least that it occurred in any essential part of the linguistic system, while in the last chapter it was moreover demonstrated that the old instrumental ending was \hbar_1 . As in my opinion \hbar_1 in Greek became ϵ , not α , the explanation of the $-\alpha$ of the adverbs as the ending of the PIE instrumental cannot be correct.⁶⁹

On the strength of $\check{\alpha}v\omega$ $\kappa\check{\alpha}\tau\omega$ Von Blankenstein, IF 21 (1907) 99-115, derives $-\alpha$ from $-\partial$. But if the ending $-\omega$ is an instrumental, as he assumes (as does Schwyzer, p. 550), then this arose from $-\partial h_1$ and $-\alpha$ would have to stem from $-h_1$. Compare with these forms Myc. paro $(\pi\alpha\rho\check{\alpha})$.

Perhaps of importance here are the forms ending in -αι, παραί καταί (unless the latter developed on the analogy of $\pi\alpha\rho\alpha i$). This ending could go back to $-e\hbar_2 i$, but $-\hbar_2-ei$ could also be considered. Beside -α (and -αι) forms ending in -ι occur, in κατι-(Thess. κατιγνειτος, Hom. κασίγνητος), *meti (OE mid(i), OHG mit(i)). If -(τ)α (κατά μετά) goes back to -(t) \hbar_2 , -(τ)ι may come from -(t) $\hbar_2 i$. In my opinion -thi is suggested by Hitt. hanti, where one would have expected -zi if there had been no laryngeal between the t and the i. For Gr. ἀντί (as against κασι- in κασίγνητος) see Lejeune, Traité, p. 54.

It is not self-evident that all the cases stated in Schwyzer (p. 622,8) have the same origin. Allowance must also be made for marked mutual influence. A careful study of the Greek dialect forms is a prerequisite here. Consequently it is not possible to go into this set of questions further. It can only be stated that if a laryngeal must be assumed here, this must have been \hbar_2 (> α), so that the instrumental ending cannot have been the origin here.

In one case it can be shown that $-\hbar_2$ served as a neuter ending with a stem ending in $e\hbar_2$. It may be wondered whether this ending may be connected with the preceding one. The form in question is $\mu \acute{e} \gamma \alpha$, of which the laryngeal is demonstrated by Skt. $m \acute{a}hi.^{70}$ OIcel. miok < Germ. * $me \acute{k}u$ may also be derived from * $me \acute{g}\hbar_2$; the -u is not analogic (Frisk, II, p. 190), but phonetic, cf. Kuiper, Act. Or. 20 (1948) 28. The declension which, on the basis of Pedersen, Cinq. $d\acute{e}cl.$, p. 47 ff., is reconstructed as follows, guarantees the laryngeal by the explanation of Skt. $h < \hat{g} - \hbar$ before vowel, which has spread from there to the other forms:

sg. nom. *
$$me\hat{g}$$
- $\acute{e}h_2$ (Skt. $mah\bar{a}$ -) acc. * $me\hat{g}$ - $\acute{e}h_2$ - m (Ved. $mah\acute{a}m$)

⁶⁹ One could assume $\varepsilon < \hbar_1$ in τῆλ-ε ὄψ-ε and the particles -δε -9ε -σε -τε (Schwyzer, p. 631:10). However, for -δε this is impossible on account of Av. -da. For -τε cf. Lesb. -τα Dor. -κα. The cases mentioned need not, of course, all be of the same origin.

⁷⁰ That Skt. *máhi* is immediately identical with μέγα and does not go back to an *i*-stem (*meĝ h_2 -i), as Burrow (*TPhS*, 1949, 45, *Sanskrit Lg.*, p. 228) assumes, is confirmed by the formula μέγα κλέος — máhi śravas (Mayrhofer, II, p. 610, R. Schmitt, *Idg. Dichterspr.*, n. 484).

gen. *meĝ-ħ2-ós

Ved. mahás

Only for one of the forms cited above it can be made probable that the - α developed from a laryngeal. As is shown below (p. 208) the forms connected with α must have had a laryngeal, e.g. α -, Skt. $sim\dot{\alpha}$ - (* s_emho -, α -, α -). It is then a reasonable assumption that α - developed from * s_emh_2 -. (For α -) is the probable assumption that α - developed from * s_emh_2 -. (For α -) is the probable assumption that α - developed from * s_emh_2 -. (For α -) is the probable assumption that α -

For κατά see p. 209.

Laryngeal at the end of the word after i or u presents a special problem. In practice we are concerned here with the neuter plural of the i- and u-stems and the feminines that are based on PIE $-i\hbar_2$ ($-u\hbar_2$). Greek forms a problem here, since here one finds $-i\alpha/-j\alpha$, $-v\alpha/-F\alpha$ as against $-\bar{i}$, $-\bar{u}$ in many other languages. The question here is whether the Greek forms are based on a phonetic development or whether they developed through analogy.

That the end of the word is particularly concerned here is evident from $\gamma \lambda \tilde{\omega} \sigma \sigma \alpha$: $\gamma \lambda \tilde{\omega} \chi^{\dagger} \zeta$, if both are derived with the element $-i\hbar_2$ from the stem of $\gamma \lambda \tilde{\omega} \chi - \epsilon \zeta$ (and $-i\zeta$ thus is based on $-i\hbar_2 s$). It is much less certain that $\pi \dot{\epsilon} \delta i\lambda \delta v$ goes back to *ped- $i\hbar_2$ -lom, from *ped- $i\hbar_2$ in $\pi \dot{\epsilon} \zeta \alpha$, Germ. *fet-i, OIcel. fit.

The first question is what the inherited form was. It has been postulated (see for instance AiGr. 3, p. 167) that the basic language already had $-\bar{\imath}$ ($-\bar{u}$), on the strength of the agreement in representation ($-\bar{\imath}$, $-\bar{u}$) in various languages; cf. beside Indo-Iranian (supra) Lith. pati (gen. $pa\check{c}i\tilde{o}s$), OCS bogynji (with secondary j), Goth. mawi (gen. $mauj\bar{o}s$). The sandhi phenomena of these endings, notably the vocative $dev\check{\imath}$ (nom. $dev\bar{\imath}$, gen. $devy\check{a}h$) in the Rigveda, however, prove that $-i\hbar_2$ $-u\hbar_2$ was preserved

The interrelation of these and similar forms should be further examined; cf. Skt. $p\acute{t}vari$ infra. The distribution of $-j\alpha$ and $-i\alpha$ ($i\dot{t}a$) and — partly connected with these — that of the forms $-\epsilon i\rho\alpha$ $-\rho i\alpha$ $-\alpha i\rho\alpha$ and $-\nu i\alpha$ should be submitted to a close examination.

down to the separate languages (p. 145). It is therefore possible that $-\iota\alpha/-\jmath\alpha$ is a phonetic development of $-i\hbar_2$.

The form *πότνι, Schulze's conjecture for the vocative πότνα (ε 215 v 391 v 61), which is based on Ved. pátni, could therefore, like pátni, be explained as a pause form of *potni \hbar_2 , as also the Greek vocatives ending in - $\check{\alpha}$ of the $\bar{\alpha}$ -stems from - $e\hbar_2$ > $[-a\hbar_2>]-\ddot{a}$ (p. 147 ff.). However, there is no support in Greek for * π ó τ vı (certainly not the vocative βο $\tilde{\omega}$ π, cf. Chantraine, Gr. Hom., p. 208), while the form π ότνα can in my opinion be explained. Wackernagel (Gött. Nachr., 1914, p. 25 n. 1) supposed a connection with $\pi \rho \epsilon \sigma \beta \ddot{\alpha}$, but thought that the latter went back to the example of πότνα. However, an argument against this is that $\pi \rho \epsilon \sigma \beta \alpha$ is historically explicable as a phonetic form (infra) and πότνα is not, while πότνα occurs in the Odyssey and πρέσβα in the *Iliad*. In the *Iliad* the vocative is πότνια, πότνια μῆτερ Z 264 (fin.), (βοῶπι(ς)) πότνια "Ηρη⁷³ Θ 471 Ο 49 Σ 357 (fin.). Πρέσβα occurs in a solemn invocation of Hera Ξ 194 = 243; in E 721 = Θ 383 as nominative (with θυγάτηρ): "Ηρη, πρέσβα θεά, θύγατερ μεγάλοιο Κρόνοιο. Τ 91 (πρέσβα Διὸς θυγάτηρ "Ατη ...) and γ 452 (... Εὐρυδίκη, πρέσβα Κλυμένοιο θυγάτρων) probably go back to this formula. In my opinion, on the formula in Ξ that of υ 61 is based: "Αρτεμι, πότνα θεά, θύγατερ Διός, αΐθε μοι ἥδη. The change could still have taken place in the verse of Ξ (i.e. "Ηρη, πότνα θεά); πότνια is also an old epithet of Hera, as we have seen (n. 73). In ν 391 and ε 215 too one finds the formula πότνα θεά (Athena and Calypso — a minor deity — respectively, cf. T 91 supra), in v at the same place in the verse, in ε at the beginning. (For $\pi \rho \varepsilon \sigma \beta \alpha$ see p. 158). The form πότνα is therefore an artificial one and must further be left out of consideration.

The declension of these feminines may be reconstructed as follows:

	PIE	GR	VE	D
sg. nom.	$-i\hbar_2$	-1α, -jα	- ī	-īs
acc.	- $i\hbar_2$ - m	-ιαν, -jαν	-īm	-iam
gen.	- $i\acute{e}\hbar_2$ - s	- <u>j</u> āç	-yāḥ	$(-iah < *i\hbar_2-ós)$

The genitive cannot have given anything else but $-i\bar{a}s$ (in all languages), but the development of the accusative is unclear. As the accusative of $p\acute{a}nth\ddot{a}h$ ($-\bar{a}m$), which goes back to *ponte \hbar -m, must be read in the Rigveda as $-\check{a}\check{a}m$ (Kuryłowicz, Etudes, p. 35), the development here must have been $-e\hbar$ -m > $-a(\hbar)am$ > $-\bar{a}m$. In the same way one would therefore have expected $-i\hbar_2$ -m > $-i\hbar am$ > -iam in Indian. This ending is in fact found, but in addition $-\bar{i}m$, which Avestan also has, while Old Irish also points to that (Schwyzer, p. 473). Within Greek forms like $\gamma\lambda\omega\chi$ iva might suggest an accusative $-\bar{i}m$. Of course, the difference could be a sandhi phenomenon ($i\hbar m$ V- $-\bar{i}m$ V- as against $-i\hbar m$ C- $-i\hbar m$ C-), but there is nothing to show this and the distribution in Vedic does not point in that direction. This problem cannot be further discussed here. For Greek allowance must therefore be made for two possibilities:

⁷⁸ Ruijgh, *Het Myceense dialect*, Leyden 1966, pp. 14 and 22, points to the great age of this formula. It seems to date from a time when the h was still pronounced and prevented hiatus as in Mycenaean (opia₂ra 'opihala' as against Hom. ἔφαλος).

157

$$\begin{array}{ll} -i\hbar_2 & -\imath\alpha/*-\bar{\imath} \\ -i\hbar_2-m & -\imath\alpha(\nu)/*-\bar{\imath}\nu(\alpha) \\ -\dot{\imath}e\hbar_2-s & -\jmath\bar{\alpha}\varsigma \end{array}$$

It is therefore conceivable that the nominative $-i\alpha$ developed under the influence of the oblique cases. However, in that case one would expect $-i\bar{\alpha}/-j\bar{\alpha}$ instead. If the accusative was $-i\nu$, it would be irrelevant here, but if $-i\alpha$ (with $-\nu$ added later) was phonetic, the nominative $-i\alpha$ may have been formed after this accusative $-i\alpha(\nu)$. Phonetically, $-i\hbar_2\eta > -i\alpha$ seems to me the most probable for Greek, but — as stated above — the cognate languages seem to point to -im.

The idea that a paradigm $-\bar{\alpha}$ $-\bar{\alpha}\varsigma$ $(-\hbar_2 - e\hbar_2 - s)$ would have exerted influence is untenable, since such a declension did not exist (Schwyzer, p. 476:6). Come to that, in such a case influence of $-\bar{\alpha}$ - $\bar{\alpha}\varsigma$ would be more obvious (Pedersen, *Cinq. décl.*, p. 32, n. 1).

As stated above, the neuter plural of the *i*- and the *u*-stems in Greek also has - $J\alpha$, - $F\alpha$ as against - \bar{i} , - \bar{u} elsewhere, e.g. τρία, Ved. $tr\hat{i}$, OCS $tr\bar{i}$, Ir. tri, Alb. $tr\bar{i}$ (fem.); δάκρυα, Ir. $d\bar{e}r < *da\hat{k}r\bar{u}$. Gr. τριάκοντα as against Lat. $tr\bar{i}ginta$ must be analogic (as also the length of the α , after τετρώκοντα π εντήκοντα). In this way the - α may be analogic in τρία itself and the whole type, just as these forms were transformed in Latin (into -ia, -ua). That Greek had extension of the - α of the consonant stems is demonstrated by the ending - $\bar{\alpha}$ of the o-stems, as against - \bar{a} in Ved. $yug\hat{a}$, OCS iga, Goth. juka, although here these can be explained in part as the ending of an original consonant stem (Schwyzer, p. 581). (It is not probable that this short - α developed from -e- \hbar_2 before vowel and in pause, since only - $\bar{\alpha}$ is known in the nominative of the feminines ending in - $e\hbar_2$.)

Cret. $\alpha \tau_i$ ' $\tilde{\alpha} \tau_i \nu \alpha$ ' has been put on a par with Av. $\tilde{c}\bar{\imath}$ (Schwyzer, p. 581) and is said to prove * τ_i < * $k^u i \hbar_2$, but this may be an indeclinable particle - τ_i , the more so on account of $\bar{o}\tau_i$ ' o $\tilde{o}\tau_i \nu o_0$ (a view stated by Buck, Gr. Diall., p. 102). In that case Megar. $\sigma \alpha$, Ion. $\tilde{\alpha}\sigma\sigma\alpha$ (from - $\alpha \sigma\sigma\alpha$) is old ($\sigma\sigma\alpha$ should not be reconstructed in τ 218, Chantraine, Gr. Hom., p. 280). Latin has quia, which is analogic; compare for this the instrumental $qu\bar{\imath}$, Av. $\tilde{c}\bar{\imath}$, which will go back to * $k^u i - \hbar_1$ (see p. 146f.).

To suppose that πολλάκις (II.) replaces an older *πολῦκις, parallel to Ved. purůcid, (Schwyzer, p. 299:4; and also Frisk s.v. -κις) to explain the κ does not in my view have enough of a basis: one is too quick to compare with the other languages here. The development of the labio-velar in * k^u i-, k^u o- gives a series of problems (Schwyzer loc. cit.; cf. the scepticism of Lejeune, $Trait\acute{e}$, p. 37 f.), which in my opinion must be regarded as a whole. It seems that -κις was added behind existing forms (in this case, therefore, πολλά). Even if a *πολῦκις should form the basis here, one cannot draw any conclusions from this regarding the development of - $u\hbar_2$ at the end of the word.

⁷⁴ As recently stated by Szemerényi, Kratylos, II (1966), 213, n, 29, without argumentation,

A parallel of the feminines ending in $-j\alpha < -i\hbar_2$ with $-F\alpha < -u\hbar_2$ is perhaps $\pi\rho\epsilon\sigma\beta\alpha$. As remarked above, $\pi\rho\epsilon\sigma\beta\alpha$ seems an old form. The explanation by $*presg^uu-i\hbar_2 > *\pi\rho\epsilon\sigma\gamma_{\rm F}\alpha$ (which in my opinion would have become $*\pi\rho\epsilon\sigma\gamma_{\rm J}\alpha > *\pi\rho\epsilon\sigma\zeta\alpha$) is not convincing: one would expect ($*presg^ueu-i\hbar_2 >$) $*\pi\rho\epsilon\sigma\beta\epsilon\alpha$ (which does not occur as an old feminine), such as $\eta\delta\epsilon\alpha$ as against Skt. $sv\bar{a}dv\bar{t}$. Consequently Schmidt, Pluralbildungen, pp. 57 f., among others, has explained it as a parallel of $-j\alpha$ with the u-stems, i.e. $\pi\rho\epsilon\sigma\beta\alpha < *presg^uu\hbar_2.^{75}$ This form would explain the $\beta < g^u$ (Cret. $\pi\rho\epsilon\iota\gamma\iota\varsigma$, Boeot. $\pi\rho\iota\sigma\gamma\epsilon\iota\epsilon\varsigma$, Skt. $agre-gi\hbar$) (Schmidt, Boisacq s.v.), but this probably comes from the oblique cases. As $\pi\rho\epsilon\sigma\beta\iota\varsigma$ is hysterodynamic (Kuiper, Notes, p. 49 f.), i.e. is flected $-g^u\dot{\epsilon}us -g^u\dot{\epsilon}u - g^u\dot{\epsilon}u - g^u\dot{\epsilon}u$ etc., the β may stem from the antevocalic zero grade of the stem (with $-g^uu-V$); elsewhere, therefore, the γ was generalized from the anteconsonantal stem (with $-g^uu-C$); cf. Boeot. $\pi\rho\iota\sigma\gamma\iota\iota\epsilon\varsigma$; Hom. $\pi\rho\epsilon\sigma\beta\iota\iota\epsilon\varsigma\iota\varsigma$

The form πρέσβα is of great importance here, since an explanation of this form by analogy starting from *presg"uħ₂ *presg"uæħ₂s > *πρεσγῦ *πρεσβᾶς is improbable.

The development $-u\hbar_2 > -F\alpha$ is perhaps also found in a few forms of $\alpha i\pi \dot{\alpha} \dot{\alpha}$ in Homer. Here one finds the forms $\alpha i\pi \dot{\alpha}$ (n. pl.) and $\alpha i\pi \dot{\alpha} \dot{\nu}$, which seem to point to *αiπός. Chantraine, Gr. Hom., p. 252, points out that $\alpha i\pi \dot{\gamma} \dot{\nu}$ occurs only in the more recent parts, N 625 γ 130 ϑ 516 λ 533 ν 316. However, this does not offer any explanation for the origin of these forms, since thematization (as in ἐτεός, κεν(ε)ός, μονός, see Frisk s.vv. and Schwyzer, p. 472) does not seem probable to me in this case, since the word *αiπός does not occur any more (Hes. Fr. 150.23 MW has the Homeric αiπὰ ῥέεθρα), whilst αἰπός itself is found only in poets (Hes., Pi., B., S.). In Homer too the use of αἰπός is limited: only nom. and acc., 25 times (out of 53) with ὅλεθρος⁷⁶. The feminine forms are -εῖα B 811 \sim Λ 711 and -εῖαν I 668.

⁷⁵ For the structure of this word cf. *sye \hbar_2d -(e)u- (\dagger δύς), *bhe \hbar_2gh -(e)u- (π ῆχυς), *ple \hbar_1dh -y-(e) \hbar_1 -(π ληθύς).

With few exceptions it occurs in the sixth or at the beginning of the fifth foot. Αἰπὸς ὅλεθρος nom. (Λ 174. 441 M 345. 358 N 773 P 155. 244 ε 305 χ 28; non-fin. Ξ 99) and acc. (Z 57 K 371 Ξ 507 Π 283. 859 Σ 129 α 11 ι 286. 303 μ 287. 446 ρ 47 χ 43. 67; non-fin. α 37); αἰπὸν "Ολυμπον (Ξ 367.868; non-fin. O 84), αἰπὸ τε τεῖχος (Z 327 Λ 181 ξ 472); on the boundary of the fourth and fifth foot αἰπὸ πτολίεθρον (Ξ 538 Υ 485 κ 81 o 193). Πόνον αἰπὸν (Ξ 651; non-fin. Ξ 601), φόνον αἰπὸν (Ξ 365, non-fin. Ξ 843 Ξ 379), χόλον αἰπὸν (Ξ 223), βρόχον αἰπὸν (non-fin. Ξ 278), ὅρος αἰπὸ (Ξ 603.829 Ξ 287 Ξ 514, non-fin. Ξ 431). Entirely isolated cases are N 317 (first foot) and O 71 ("Ἰλιον αἰπὸ init.).

AFTER i, u 159

On the two occasions that $\alpha i\pi \dot{\alpha}$ occurs (Θ 369 Φ 9) one finds $\alpha i\pi \dot{\alpha}$ δέεθρα at the end of the verse, preceded in Θ by Στυγὸς ὕδατος. If we are concerned here with an old formula, which is suggested by the use at the end of the verse and perhaps the connection with the Styx, 77 $\alpha i\pi \dot{\alpha}$ could be based on $^*\alpha i\pi_F\alpha < -u\hbar_2$, i.e. have the old neuter plural of an u-stem. However, it is possible that $\alpha i\pi \dot{\alpha}$ is a form determined by the metre, since $\alpha i\pi \dot{\alpha}$ δέεθρα corresponds in metrical structure to $\alpha i\pi \dot{\alpha}$ δλεθρος. One might assume an $^*\alpha i\pi \dot{\alpha}$ δέεθρον. In Homer only the plural δέεθρα occurs (12 times in Φ, 10 times elsewhere).

The form $\alpha i\pi \eta \nu$ appears in five related verses: γ 130 = ν 316 $\alpha i \tau i \rho$ έπεὶ Πριάμοιο πόλιν διεπέρσαμεν $\alpha i\pi \eta \nu$, λ 533 ($\dot{\alpha}\lambda\lambda$) ὅτε δη etc.), ϑ 516 (... πόλιν κεραΐζεμεν $\alpha i\pi \eta \nu$), N 625 (... διαφθέρσει πόλιν $\alpha i\pi \eta \nu$). Here too the form may have developed under pressure from the metre: if the word must form the sixth foot, as in φόνον (etc.) $\alpha i\pi i \nu$, it must be disyllabic. However, none of these locutions conveys the impression of being older than that with $\alpha i\pi i \nu$. A second possibility is that $\alpha i\pi i \nu$ is based on $\alpha i\pi i \nu$, but the place in the verse does not suggest this. It therefore seems probable to me that this form is an analogic transformation of the feminine * $\alpha i\pi i \nu$ 0 with - $\pi \alpha < -u\hbar_2$. Great age of this form (or the one it represents) is suggested by the use at the end of the verse — and perhaps the meaning of γ 130.

In this way the adverbs ending in $-\alpha$ of adjectives ending in $-\circ$ ς could also be explained, such as κάρτα, τάχα; see Schwyzer, p. 622. Thus ῥίμφα could be based on *(F)ρεμφα < *Fρεγχρα < *(ψ)renghuħ₂, having regard to Lith. rángstus etc.; see Frisk s.v. With θ αμά, however, one would expect lengthening of the stem vowel in Ionic (* θ αμFα > * θ Φμα); however, analogically this could again have been done away with. But I see no possibility of further verifying the correctness of this assumption.

An explanation by analogy is therefore possible for various categories of $-j\alpha$ - $F\alpha$ from $-i\hbar_2$ - $u\hbar_2$. However, if one considers the whole, it seems more obvious to assume a phonetic development than to accept that everywhere an analogy, and each case a different one, operated to give an (again) identical result ultimately (everywhere $-j\alpha$ - $F\alpha$).

If this is true, Greek — unlike all other languages — would have vocalized a consonantal laryngeal here. This recalls the fact that Greek (with Armenian) is the only language that vocalizes the consonantal laryngeal at the beginning of the word (before consonant). These facts must evidently be considered together: Greek thus has a greater tendency towards vocalization of the laryngeal than the other languages, which is evidenced by the treatment of the laryngeal at the beginning and end of the word. However, the differences between these two cases must be recognized: at the beginning of the word only laryngeal before consonant (HCV-, HRV-) is vocalized; laryngeal after consonant at the end of the word is vocalized in several languages (but not for instance in Avestan, cf. $man\mathring{a}$, supra, p. 152). At the end of the word the laryngeal is, as we saw, also vocalized in $-i\hbar_2$, $u\hbar_2$ after consonant; at the beginning of

 $^{^{77}}$ The qualification αἰπός is very suitable for the waterfall that has been identified as the Styx, which falls from a height of 60 m.

the word $i\hbar_2C$ -, $u\hbar_2C$ - does not become $J\alpha C$ -, $F\alpha C$ - (nor does \hbar_1iC - become αiC -). I do not see any connection with other phenomena at the beginning or end of the word in Greek (Lejeune, *Traité*, pp. 239-55).

It would be interesting to investigate how Armenian deals with these forms (cf. eresun 'thirty' from *eri-a-sun according to Meillet, Esquisse², p. 164).

The inevitable conclusion is that $-i\hbar_2$ was preserved down to Greek and had not become -i in PIE. This is also postulated by the sandhi phenomena in Vedic (p. 145). It is not clear to me how Lehmann, PIEP, p. 91, can deny this: "The presence in Greek of such uncontracted forms does not contradict the assumption that $/i\cdot/$ and $/u\cdot/$ were phonemic in PIE. Gk. merely preserved and generalized some infrequent case forms". For it is not conceivable that some forms were preserved uncontracted. Lehmann believes that the same development may be found in the middle of the word in $\pi \rho i \alpha \mu \alpha i$ (sic) etc. These forms are discussed on p. 247 ff. It seems to me that they have to be explained differently.

a. Adverbs ending in -τι

It may be wondered whether the adverbs ending in $-\tau\iota$, which in Homer have partly a short $-\iota$ and partly a long one, form a parallel of the sandhi phenomenon found in the Rigveda. The length of ἀμαχητί Φ 437 and ἀμογητί Λ 637 cannot be determined. Of all these words the penultimate syllable is long. Five of them have in the two preceding syllables the structure \cup —, so that here the last syllable must necessarily be long if the word is to be used in the hexameter (the structure \cup — \cup being excluded): ἀνιδρωτί Ο 228, ἀνουτητί Χ 371, ἀνωιστί δ 92, ἀναιμωτί P 363. 497 σ 149 ω 532, ἐγρηγορτί Κ 182. Of the others (with the structure (\cup) \cup — \cup $-\iota$ is short: μελεϊστί μεγαλωστί ἐκητί ἀεκητί. The words are not limited to fixed formulae; one finds only (διὰ) μελεϊστὶ ταμ- (3 times) and μέγας μεγαλωστί (twice), of which the first does not point to the phenomenon discussed here (before consonant one would expect long $-\iota$). It therefore seems most probable that the long ι is a lengthening for the sake of the metre, and that there is no reason to assume a laryngeal here.

b. The Group -(t)rħ

Separate mention should be made of $v\acute{\epsilon}\kappa\tau\alpha\rho$, of which the second part has been identified as the stem *terħ2- 'überqueren, überwinden', which is found in Vedic compounds ending in -tur- (nom. -t\acute{u}r, acc. -t\acute{u}ram). R. Schmitt, Idg. Dichterspr. n. 12, pp. 38 f. and pp. 155-8, both with notes, recently discussed this matter in detail. He rejects Thieme's attempt (Stud. z. Idg. Wortkunde u. Religionsgesch., pp. 5-15) to explain the representation - $\tau\alpha\rho$ of PIE - $tr\hbar_2$ as a neuter ending in - t_r beside a masculine ending in - $t_r\hbar_2$, which in fact would still have to be explained itself. Pisani's explanation (OLZ 48 (1953) 121 n. 2) of the nominative from the declension (gen. - $t_r\hbar_2$ -os > - $\tau\alpha\rho\circ\varsigma$) is rejected by Schmitt because the nom.-acc. is much more frequent than other cases, Il. 5:0, Od. 2:1 (gen., 1 359). Schmitt himself assumes that - $\tau\alpha\rho$

AFTER i, u 161

is phonetic, owing to the fact that the laryngeal disappeared, either in sandhi before vowel or like all final consonants (*ébheret > ĕφερε). I do not believe — assuming the correctness of the whole etymology — that the latter explanation is the right one. There is no evidence of disappearance of the final laryngeal in Greek (cf. for instance $μέγα < *meĝħ_2$, $γένεα < -esħ_2$, $-\bar{α} < -e\hbar_2$); the disappearance in the vocative is another case, because this form always stood by nature in a position in which it had to disappear. In Indian the $-\hbar_2$ has also been preserved in the nom. $-t\tilde{u}r$. The conceivable developments are in my opinion 1. $-trħ_2 > -\tau ρ\bar{α}$ as in the middle of the word; 2. $-tr\hbar_2 > -\tau ρ\bar{α}$ (cf. $-j\bar{α}$); 3. $-tr\hbar_2 > -\tau αρα$. Now, whichever of these three may have been the phonetic development, it seems to me evident that this form was replaced by $-\tau αρ$ after the example of the words ending in $-\alpha ρ$ and under influence of the paradigm (as Pisani believed), since otherwise this neuter nominative would have been entirely isolated in Greek. This would be quite obvious, especially if the third assumption was the right one.



LARYNGEAL IN THE MIDDLE OF THE WORD

Compared with the position at the beginning or the end of the word, the possible surroundings for the laryngeal in the middle of the word are of course greater. They will all be considered separately in the following chapters.

An explanation, as in the preceding section, is hampered by the sonants which, depending on the further structure of the word, may function either as consonants or as vowels. In one case they display a special development that must be discussed separately. To make the treatment clearer, a survey will be given of the following chapters:

Ch. VI.	VHC
Ch. VII.	VHV
Ch. VIII.	$Hi/\dot{\underline{\iota}}, Hu/\dot{\underline{u}}$
Ch. IX.	CHV
Ch. X.	CHC
Ch. XI.	RH (the disyllabic roots)
	Ch. VII. Ch. VIII. Ch. IX. Ch. X.

Chapter VIII can of course be divided among VI, VII, IX and X, but as these cases occur of one stem, it seemed more desirable to take them quite separately. Chapter XI, too, may be divided among the four chapters mentioned, but here the same applies as for VIII, while moreover in this case $r \nmid m n$ followed by laryngeal display a special development.

At the end in a separate chapter (XII) the material is presented where an interconsonantal laryngeal seems to be lost.

VI. AFTER VOWEL BEFORE CONSONANT

As the vocalic sonants $r \nmid m \mid n$ followed by laryngeal display special developments, they will be discussed in a separate chapter (XI). Here therefore only e, o and i, u plus larvngeal are to be discussed.

One of the fundamental ideas of the laryngeal theory is that the long vowels assumed for the proto-language which are not based on contraction or on lengthening developed from short vowel followed by laryngeal; see the Introduction, p. 8. This process may best be described as follows: when the laryngeal disappeared after short vowel before consonant, the length of the syllable originally closed by the laryngeal was maintained by lengthening of the vowel; before then e had been coloured to e and e by e and e and e spectively. After the disappearance of the laryngeals these sounds were preserved and thus became independent phonemes; the timbre of the (ablaut) e was not changed by the laryngeals. One therefore finds:

$$e\hbar_1 > \bar{e}$$
 $e\hbar_2 > \bar{a}$ $e\hbar_3 > \bar{o}$ $o\hbar_1 > \bar{o}$ $o\hbar_2 > \bar{o}$ $o\hbar_3 > \bar{o}^{78}$

The colouring by \hbar_2 and \hbar_3 evidently took place in the proto-language, since the opposition between the three long vowels $(\bar{e}:\bar{a}:\bar{o})$ in different languages (Armenian, Greek, Latin, Albanian, Lithuanian) corresponds exactly.

More difficult is the question when the laryngeal disappeared from this position. It seems to me that the laryngeal was preserved down to the separate languages, for two reasons.

Firstly, the development of vocalic sonant $(r \ l \ m \ n)$ plus laryngeal (Skt. $\bar{i}r$, \bar{a} , Lat. $r\bar{a}$, $n\bar{a}$) is best explained by assuming that in this case the laryngeal was preserved down to the separate languages, an assumption that is also necessary for an explanation of the Greek development ($\rho\eta$, $\rho\bar{\alpha}$, $\rho\omega$ etc.; Chapter XI). True, in the above the vocalic sonant was expressly exempted from this discussion, and it is conceivable that the laryngeal was preserved here for a longer period of time, but this cannot be rendered

⁷⁸ Even when the preceding vowel was already long $(\bar{e}\hbar)$ a long vowel naturally developed. As regards the colouring, $\bar{o}\hbar$ could hardly become anything but \bar{o} , and $\bar{e}\hbar_1$ had to become \bar{e} . In the case of $\bar{e}\hbar_2$ and $\bar{e}\hbar_3$ one could doubt whether \bar{a} and \bar{o} also developed here. The cases will have been few. The only possible case that I know is the basic form of $\dot{\eta}\dot{\omega}\varsigma$, aurora; these point in the first instance to * $\bar{a}us\bar{o}s$, which could go back to * $\bar{e}\hbar_2us\bar{o}s$ or * $\hbar_2\bar{e}us\bar{o}s$, for it is difficult to assume that * $e\hbar_2us$ -would have given * $\bar{a}us$ -.

probable. In PIE r η were vowels like e and i and it cannot be seen why the laryngeal in eHC, iHC should have disappeared before that in rHC.

Secondly, the compositional shortening in Sanskrit indicates that in that language the laryngeal was still present in this position: $s\acute{u}suti$ - 'easy birth' as against $s\acute{u}tave$, which could be interpreted as vocalic shortening, but carkrti-: $k\bar{v}rti$ -, which with vocalic shortening would have given *carkirti-, can be understood only as $-k_r\hbar ti$ -> $-k_rti$ -, so that $s\acute{u}suti$ will also have to be explained in this way (Kuiper, Die Sprache 7.14-31; for further details of this shortening see p. 204 and p. 242 ff.).

This conclusion seems to be confirmed by Hitt. pa-ah-ha-aš-mi [pahhšmi] 'to protect', root * $p\bar{a}$ - <* $pe\hbar_2$ -, with hh from h_2 . If * $pe\hbar_2$ - >* pah_2 - had already become $p\bar{a}$ - in PIE, Hitt. hh would not be explicable. See Hendriksen, Unters., p. 31

Here too it may be asked whether there are indications of a third, o-colouring laryngeal. More important arguments for this can be found elsewhere (see Conclusions, p. 265 f.). Here the following may be remarked.

Just as it has been wondered whether a non-apophonic \check{o} existed, the same may be done for \bar{o} . For it is striking that some widespread roots, such as * $p\bar{o}$ - 'to drink' and * $d\bar{o}$ - 'to give', never display an e-phase (i.e. either \bar{e} ($e\hbar_1$), or \bar{a} ($e\hbar_2$)). This consideration has of course the weakness of every argument e silentio. For it is possible to explain any \bar{o} by $o + \hbar$ (cf. Introduction, p. 4, on Pedersen). Thus for instance * $\hat{g}n\bar{o}$ - in $\gamma\iota\gamma\nu\dot{\omega}\sigma\kappa\omega$ $\gamma\nu\omega\tau\dot{\omega}\varsigma$, Lat. (g) $n\bar{o}sco$ (g) $n\bar{o}tus$, Skt. $j\bar{n}\bar{a}t\dot{a}$ -, OCS znati, where OE $cn\bar{a}wan$ ($cn\bar{e}ow$), OHG $kn\bar{a}u$ point to * $\hat{g}n\bar{e}$ -, so that one must start from $\hat{g}ne\hbar_1$ -/ $\hat{g}no\hbar_1$ -. The zero grade of this root is found in Lith. pa-zintas 'known', Lat. $gn\bar{a}rus < *\hat{g}n\hbar_1$ -ro-(instead of assuming * $\hat{g}n\bar{a}$ - as apophonic form of * $\hat{g}n\bar{e}$ -, like WH s.v.), the full grade I in Lith. $z\acute{e}nklas$ 'sign' $< *\hat{g}en\hbar_1$ -tlo-. The form * $\hat{g}no\hbar_1$ - was therefore probably separated at an early stage from the original whole; hence (g) $n\bar{o}tus$ $j\bar{n}at\acute{a}$ - $<*\hat{g}n\bar{o}$ -to with full grade instead of * $(g)n\bar{a}tus$ * $j\bar{a}t\acute{a}$ - $<*\hat{g}n\hbar_1$ -to-, with the zero grade normal for this form. It must also be admitted that the number of forms with 'non-apophonic' \bar{o} is only small.

One also finds \bar{o} in forms where one would expect e-vocalism. For instance δίδωμι beside τίθημι ἴστ $\bar{\alpha}$ μι. The e-phase is also normal in Lat. $p\bar{o}$ culum, Skt. $p\acute{a}$ tram < * $p\bar{o}$ -tlom/-trom.

A good argument in my opinion is found in Attic reduplication. But the difficulty in practice is that there are few cases with o- ω : ὀμώμοται and ὀρωρέχαται (p. 119). Here the 'prothetic vowel' in ὀρέγω demonstrates a \hbar_3 , and the second syllable displays the lengthening discussed here after the disappearance of the laryngeal, $\omega < e-\hbar_3$, * $\hbar_3 me-\hbar_3 m$ -> ὀμωμ-. However, it is the question whether these forms are old. (The Attic reduplication of monosyllabic roots like ὅπωπα I consider to be analogic; p. 121.)

Whilst for $o\hbar_3$ another result than \bar{o} is not to be expected and $o\hbar_1 > \bar{o}$ is, as far as I know, undisputed (e.g. $9\omega\mu\dot{o}\varsigma$ A., Ar. from * $dhe\hbar_1$ -in $\tau(9\eta\mu\iota)$, the situation with

 oh_2 is different. True, here — as so frequently — indisputable examples are rare, but in my opinion there are sufficient indications to allow of a conclusion. Everything suggests that here too the timbre of the o was not affected, any more than in the group h_{20} , see p. 128. Consequently I do not see on what Kuryłowicz bases his supposition that $o\hbar_2$ became \bar{a} (Apophonie, p. 173 et passim). For it is clear that in this supposition the ablaut \bar{a}/\bar{o} cannot be explained (cf. the parallel problem of \bar{a}/\bar{o} if one assumes $h_{20} > a$, p. 128). He therefore assumes (*ibid.*, p. 186) that here the zero grade $\partial > a$ of \bar{e} , \bar{a} and \bar{o} was the starting-point for new forms with \bar{o} , φημί \rightarrow φŭμέν φἄτός φάσις \rightarrow φωνή. However, this is impossible. In PIE h_1 h_2 h_3 were at first the zero grade of $e\hbar_1$ $e\hbar_2$ $e\hbar_3$ respectively. In Greek, as has been demonstrated above (p. 70 ff.) and as will be shown on p. 182 ff, these became ε α o (which Kuryłowicz rejects). It follows from this that in the zero grade the opposition between the three laryngeals was preserved down to the separate languages and was never lost in Greek. Here, in Greek, a secondary \bar{o} (ω) based on $a < \delta$, as meant by Kuryłowicz, is therefore excluded. The relation ω-α (φωνή-φάσις) does exist, but only as $o\hbar_2 > \omega$: $\hbar_2 > \ddot{\alpha}$. In Kuryłowicz' reasoning one therefore has

PIE $e\hbar_1/o\hbar_1/\partial$ $e\hbar_2/o\hbar_2/\partial$ $e\hbar_3/o\hbar_3/\partial$ — Gr. $\eta/\omega/\tilde{\alpha}$ $\bar{\alpha}/\bar{\alpha}/\tilde{\alpha}$ $\omega/\omega/\tilde{\alpha}$. Here we twice find $\omega/\tilde{\alpha}$. In my opinion this is incorrect, since \hbar_1 became ϵ and $\hbar_3 > o$, so that — if one adheres to Kuryłowicz' $o\hbar_2 > \bar{\alpha}$ — the result is:

PIE $e\hbar_1/o\hbar_1/\hbar_1$ $e\hbar_2/o\hbar_2/\hbar_2$ $e\hbar_3/o\hbar_3/\hbar_3$ — Gr. $\eta/\omega/\epsilon$ $\bar{\alpha}/\bar{\alpha}/\check{\alpha}$ $\omega/\omega/o$, in which $\omega/\check{\alpha}$ does not occur.

Apart from these considerations, such a series of analogic formations is improbable. (This objection applies to the whole — more recent — view held by Kuryłowicz, who postulates so extensive a system of analogic transformations that these can no longer be accepted; cf. p. 206, 212.)

The following may be mentioned as indications of $o\hbar_2 > \bar{o}$:

With the stem $β\bar{\alpha}$ - of ἔβην belongs βωμός, $*g^uo\hbar_2$ -mos; for the o-vocalism cf. βωμός supra and for instance ὄγμος from $*\hbar_2oĝmos$, p. 128.

Mention was already made above of φωνή from φāμί, *bhoħ₂-nā. For the old o-vocalism cf. ποινή, Av. kaēnā, OCS cěna from PIE *kuoi-nā. However, a different analysis was defended by Cuny, Mélanges Boisacq 1 (1937) 227-331: it contains the suffix -onā and *bheħ₂-ona became *bha(ħ₂)onā > φωνή. However, this suffix (Schwyzer, p. 490) occurs in the names of implements (ὀθόνη, σφενδόνη, βελόνη, περόνη) and in abstracts (ἡδονή, αὐονή; Skt. svádana- does not contain an element -on-, since this would have given -ān-). Φωνή could belong to the first group, although these seem to be words of non-IE origin (cf. the difference in accent with the second group and with φωνή). However, if one starts from *bheħ₂-ona, the evidence remains practically the same, for, if it is assumed that ħ₂ coloured an adjoining o to a, one gets *bhaħ₂anā > *φāνā. (As stated above, the problem of the development of ħ₂o is in principle the same as that of oħ₂.) In that case one could postulate a recent formation; as *φā-ovā in Doric would have given *φāνā (Lejeune, Traité, p. 235), only *φă-ovā could then still be considered. Consequently, of greater importance here than φωνή

is φωνέω, which is not derived from φωνή (cf. Schwyzer, p. 720 n. 10). It will be a denominative, but then derived from a stem φωνε/o-, which was lost in later Greek; this points to great age for the stem φων-, and makes it improbable that it contains an element -on- (-one/o- beside -onā is very rare: only the in my opinion dubious cases θρόνος κλόνος χρόνος, Schwyzer, p. 490,5). (*Bhoħ₂-nā is now also given by Chantraine, Morph.², p. 6.)

The word for 'ear', which in part has o-vocalism ($o\delta\varsigma$, $\delta\varsigma$) and in part a-vocalism (Lat. auris), seems to me to be a clear case. If the interchange ou/au is not automatically accepted for the proto-language one has to start from basic forms like * $o\hbar_2us$ -(nom.), $e\hbar_2us$ - (or * \hbar_2ous -, \hbar_2eus -; perhaps with long o; for e/o in a neutral word cf. γ óvv: Lat., Hitt. genu) and assume that the \hbar_2 did not change the timbre of the o. Ruijgh, who does not do the latter, is obliged to consider the existence of two different roots, * \hbar_2eu - and * \hbar_3eu - (Etudes, p. 58 n. 54).

Άκωκή may also contain $o\hbar_2$; see p. 125 f.

Another case in which one cannot accept Kuryłowicz' explanation by means of analogy is the root * $p\bar{a}$ - $/p\bar{o}$ - 'to protect': Lat. $p\bar{a}sco$ $p\bar{a}stor$ $p\bar{a}bulum$, Hitt. pa-ab-ba- $a\bar{s}$ -mi [$pahh\bar{s}mi$], Goth. fodjan — π ων π οιμήν (cf. π ατέομαι, Frisk s.v.).

Other forms cited from Greek are θήγω (θάγω) — τέθωκται τεθύμωται and τεθωγμένοι beside τεθαγμένοι. (If these forms are old, the ω must have been introduced from elsewhere, since in the middle one expects zero grade.) Cf. Frisk s.v. *9ώσσω.

The analysis of the ending 1 sg. pres. of the thematic verbs $-\bar{o}$ as $-o-\hbar_2$, with \hbar_2 identical with that in 1 sg. perf. $-a < -\hbar_2 - e$ and 1 sg. midd. $-ai < -\hbar_2 ei$ also fits into this picture; see p. 133. See Add.

To demonstrate laryngeal after vowel by means of Greek material on other grounds than the compensatory lengthening discussed here is possible in only a few cases, if we leave the type $*dhe\hbar_1$ - $/dh\hbar_1$ - out of consideration. For Indian the explanation of the (t)h in ti-sth-ati by the laryngeal from the root $*ste\hbar_2$ - in *sti-sth-ati may be recalled here.

In the present reduplication one finds lengthening of the *i*, Skt. *iyarti*: *frte* from * $\hbar_3 i$ - $\hbar_3 erti$: * $\hbar_3 i$ - $\hbar_3 rtoi$, 79 *ájati*: *fjati*. An example of this is found in Greek in lάπτω: * $\bar{t}\pi\tau$ ομαι. More of a problem is formed by †χανάω (Hom.), Skt. *fhate* 'to crave, yearn'; the cognate ἀχήν (Theocr., ἀχηνία A.) 'poor', Av. *āzi* 'craving' will go back to * $\hbar e\hbar_2 \hat{g}h$ - and therefore *fhate* will go back to * $\hbar i\hbar\hbar_2 \hat{g}h$ -. See p. 129.

The stem $dot{o}πiπ$ - seems to go back to *opi- $\hbar_3 k^u$ -, ἐνiπή to *eni- $\hbar_2 k^u$ - (p. 129).

The lengthening in Attic reduplication was already mentioned above (* $\epsilon\lambda\eta\lambda$ 00 θ - < * \hbar_1 le- \hbar_1 loudh-).

A category that was not yet discussed earlier is the augment in words that have 'prothetic vowel', such as $\eta \epsilon i \delta \epsilon \tilde{\eta} \rho i \pi \epsilon$ from e-HC-. The fact that a PIE basic form

⁷⁹ This form would perhaps have given *hihṛtoi > *iyṛte. In that case the i will stem from the 3 pl., *hihṛṇtoi > irate (for the structure cf. *dhuṇħtós > 9vṛtós, not *dhunḥtós).

is concerned here is demonstrated by Sanskrit, e.g. $\bar{a}nat$, from the root nas-, from *e- $\hbar_1 ne\hat{k}$ -t.

From the stem * $bh\bar{u}$ - one finds du. ĕ $\phi\bar{v}$ τον, Skt. $\dot{a}bh\bar{u}tam$, where the laryngeal is evident from the disyllabic root in Skt. $bh\dot{a}vitum$, *bheuh-/bhuh-.

In this way disyllabic root is demonstrated for $9\bar{\nu}$ by Skt. *do-dhavī-ti*, *dhavítram*. See p. 186. Hitt. *tuḥḥuwai*- 'smoke' etc. probably belongs with this (Friedrich, *Erg.h.*, p. 2 s.v.).

Πῖαρ, πίειρα, Skt. pɨvarī seems to go back to *piħ- \dot{q} -er-, of which the full grade *pei-ħ- is perhaps found in Skt. páyate 'to be blown up', and the stem II *pɨ-eħ- in pyáyate. The zero grade pipyúṣī < *pi-piħ-us-iħ² would have had to have lost the laryngeal in compounds.

In the latter cases one is therefore concerned with the zero grade of disyllabic roots with i, u as second consonant; those with r l m n (zero CRHC) are discussed in Chapter XI.

An example from declension is the genitive of the $J\alpha$ -stems. This is the type δρόγυια *ὀργυιάς (p. 37), Skt. devi devyāh, of which the ending must have been nom. $-i-\hbar_2$, gen. $-i-\hbar_2-s$.⁸⁰

Another case of lengthening is the nominative of the type $\gamma\lambda\omega\chi$ ic, of which the ending -ic will go back to - $i\hbar_2$ -s.

Reference should also be made here to all stem II forms of the disyllabic roots (*TReH*), for which I refer to Chapter XI.

Finally, attention should be drawn to the fact that the development of $-e/o\hbar$ at the end of the word to long vowel is based on the principle discussed here; see for this p. 145 f.

⁸⁰ The genitive here must therefore originally have had an acute accent, -άς, unlike the circumflex of the \bar{a} -stems, see p. 170; usually one reconstructs a circumflex here, e.g. Pedersen, *Cinq. décl.*, p. 30.

VII. BETWEEN VOWELS

Intervocalically the laryngeal was lost, as everywhere else. Indo-Iranian forms in which the hiatus has been preserved demonstrate that this did not happen until the separate languages; see the Introduction, p. 9f.

As regards the colouring by the laryngeals, the same rules apply as stated in the previous chapter. Cf. $\delta \alpha \tau - \langle *de\hbar_2 i - t -, p. 175, \pi \circ \iota \mu \dot{\eta} v \langle *po\hbar_2 i m \dot{e}n, p. 168.$

The most frequent and clearest cases of intervocalic laryngeal are those where the laryngeal stands before i or u, which are dealt with separately in the following chapter.

It may also be asked here what happened to the group $-e\hbar_{2,3}e$. It has been demonstrated above that the laryngeal colours both preceding and following e. It is therefore plausible that here both were coloured, but it is equally possible that the colouring was confined to the tautosyllabic, i.e. following e. A case where this situation occurs is the declension of the \bar{a} -stems. The development of the genitive here may be imagined as follows:

(a)
$$-\dot{e}\hbar_2 - es > -\dot{a}\hbar_2 as > -\dot{a}as > -\tilde{a}s$$

But allowance must also be made for the following possibilities:

(b)
$$-\dot{e}\hbar_2 - es > -\dot{a}\hbar_2 es > -\dot{a}es > -\tilde{a}s$$

(c)
$$-\dot{e}\hbar_2$$
- $es > -\dot{e}\hbar_2$ as $> -\dot{e}$ as $> -\tilde{a}$ s

However, it should be borne in mind that, as the laryngeal was preserved intervocalically until after the division of the proto-language, the development from the second to the third phase (in each of the lines of development stated) took place in the separate languages. Now, since in all cases the result of the contraction is the same $(-\tilde{a}s)$, it is more probable that $-a\hbar_2as$ was the starting-point, since ae or ea did not necessarily become \bar{a} everywhere. (This may be doubted for Greek, for instance; cf. Lejeune, $Trait\acute{e}$, pp. 233-6, although these contractions are probably more recent.)

The question of the so-called temporal augment should also be raised here. In the case of verbs that began with a, this goes back to $\hbar_2 e$ - (p. 133 ff.), so that the augment form here (for instance) was $*\acute{e}-\hbar_2 e\^g$ -om. On the strength of the consideration stated above, one may therefore assume PIE $*\acute{a}\hbar_2 a\^g$ om > Gr. $\acute{a}ag$ on > $\~ag$ yov. In present stem forms and aorists o- will be mostly based on $\hbar_3 e$ -, so that for instance $\~ag$ upoag000, Skt. $\~am\~it$ 1, PIE $*\acute{e}-\hbar_3 em\hbar_3$ - > $*o\hbar_3 om\hbar_3$ - may be reconstructed. (Verbs with $\hbar_1 e$ - or e-present no problems, since something other than $\~e$ - < $\acute{e}(\hbar_1)e$ - is not imaginable.) In Indian one would expect traces of $\~ae$ -, which are not frequent, however.

Where *i*- is present reduplication, this probably developed from $\hbar i$ - \hbar -, e.g. $\hbar \omega < \hbar_2 i$ - $\hbar_2 e u$ -. There is no trace of the forms $\star \acute{e}$ - $\hbar_2 i$ - $\hbar_2 e u$ -> $\star a\hbar_2 i\hbar_2 a u$ -> (Gr.) $\star a_i a u$ -(with \hbar_1 and \hbar_3 e i and e i-) to be expected. Greek has $\bar{\iota}$ - here, as in forms with ι - of a different origin as well as $\bar{\upsilon}$ - from υ -, $\hbar \acute{a} \iota \upsilon \upsilon$ - (**is*-?), $\bar{\upsilon} \iota \upsilon$ - $\bar{\upsilon} \iota \upsilon$ - This $\bar{\iota}$ $\bar{\upsilon}$ must therefore have arisen on the analogy of the above-mentioned forms with long vowel from contraction (Schwyzer, p. 654f.). Here Indian has ai au (ai-cchat from ai-cchat ai-ai-cchat from ai-chat ai-chant from ai-chat ai-chant from
A rather complicated case is the genitive of $\pi\lambda\eta\vartheta\dot{\eta}\varsigma$. On the strength of the comparison with Lat. $pl\bar{e}b\bar{e}s$ (Pedersen, Cinq. décl., p. 62 f.), the original paradigm may be reconstructed as follows (Kuiper, Notes, p. 12-9):

sg. nom.	*pleħ1dh-ᡎ-ḗħ1-s
acc.	$ u$ - $\epsilon\hbar_1$ - m
gen.	u - \hbar_1 - $\acute{o}s$
pl. loc.	u - \hbar_1 - $s\acute{u}$
instr.	u-ħ ₁ -bhís.

In the genitive the laryngeal therefore fell intervocalically. In the nominative the weak stem before consonant, $-u-\bar{h}_1-C > -\bar{v}C$, was introduced in Greek; in Latin the full grade stem, $-\psi-e\bar{h}_1-C > -(\psi)\bar{e}C$, was generalized.

Another example from declension is the genitive of $d\phi p \psi \zeta$, of which the declension was * $\hbar_3 bhr \acute{e}u\hbar s$ * $\hbar_3 bhr \acute{e}u\hbar m$ * $\hbar_3 bhr u\hbar \acute{s}$ * $\hbar_3 bhr u\hbar \acute{s}$ (Kuiper, Notes, p. 9).

Cowgill (p. 147) states as example πλεῖστος $<*ple\hbar_1$ -istos. However, in that case this would have the full grade from the comparative, instead of the expected zero, $*pl\hbar_1$ -istos, which would have given $*\pi\epsilon\lambda\iota\sigma\tau\circ\varsigma$. See p. 174.

It is not clear whether λ ύω originally had a laryngeal: βουλῦτός, Lat. solūtus (Skt. lunāti, 'to cut off, destroy', lavitra-?). The short vowel in present and imperfect may have developed antevocalically, but the forms ἐλύμην λύτο seem old. Although the term appears old, the υ may be long in βουλυτόνδε (Π 779 = ι 58) for the sake of the metre.

Cowgill is of the opinion that the adjectives ending in $-\alpha \tilde{1} \circ \zeta$ from substantives ending in $-\tilde{a}$ may be explained as $-e\hbar_2-i\dot{\mu}o->-ai\dot{\mu}o-$. But after $e\hbar_2$ one would expect $\dot{\mu}o$ (and not $i\dot{\mu}o$). It is also the question whether the origin of this form must be sought in PIE. I do not see that the laryngeal theory offers new possibilities here. (For the problem see Schwyzer, p. 467, Lejeune, $Trait\acute{e}$, p. 145 f., Buck-Petersen, $Reverse\ Index$, p. 44 f., with lit.).81

There are two further special groups that belong to this category, viz. those with vocalic sonant $r \nmid m n$ before or after the laryngeal.

A case of VHR could be the imperfect of opvout, * \acute{e} - $\hbar_3 r$ -n-u-to. However, here no

⁸¹ Ruijgh, *Etudes*, p. 212, assumes $-e\hbar_2\dot{i}o->-ayyo->-\alpha io-$, but does not explain the development $-e\hbar_2\dot{i}o->-ayyo-$ for the expected $-\bar{a}\dot{i}o-$.

conclusion may be drawn from $\delta \rho \nu \nu \tau \sigma$ with regard to the phonetic development, for this augment form may have been taken over from the aorist (*e- $\hbar_3 er$ -). In my opinion one might expect $e\hbar_3 r > o\hbar_3 r > Gr$. $o\hbar_3 or > oor > \bar{o}r$, $\omega \rho$. I do not know another case with this sequence. In Indian one has * $\hbar_3 i$ - $\hbar_3 r toi > irte$, where one could also expect * $\hbar_3 i$ - $\hbar_3 r$ -toi > ivre; however, here too an explanation by analogy is possible (see p. 168).

If the preceding vowel was $r \nmid m n$, a special development took place, which will be discussed under the disyllabic roots in Chapter XI.

VIII. BEFORE i/i, u/u

If a laryngeal was followed by i or u, it depended on the further structure of the word whether that i, u functioned as a vowel or as a consonant. The same may occur in principle with r l m n, but I know no cases of this except those mentioned at the end of chapter VII, while i and u often occurred as enlargement of roots, also of roots ending in laryngeal.

This possibility of two different developments has been mentioned by Kurylowicz, Etudes, p. 36 ff., e.g. Skt. stāyú-: stená- from PIE *steħ2iu-: *steħ2i-no-.

The clearest case is presented by the root * $p\bar{a}$ -/ $p\bar{o}$ - 'to protect', * $pe\hbar_2$ -/ $po\hbar_2$ -, from which one has π οιμήν < * $po\hbar_2i$ - $m\acute{e}n$ as against Skt. $p\bar{a}y\acute{u}$ - 'guard, protector', π õ \ddot{u} < * $po\hbar_2i$ -u. The non-enlarged root is found in Hitt. pa-ah-ha-aš-zi [pahhšzi] 'to protect' and Lat. $p\bar{a}sco$ $p\bar{a}stor$ $p\bar{a}bulum$. True, Gr. π οιμήν could also have developed from * π ωιμήν, but the \bar{o} (ω) could only be explained by the improbable structure * $po\hbar_2i$ mển.

If $\bar{a}i$ in Skt. $st\bar{a}y\dot{u}$ - $p\bar{a}y\dot{u}$ - is to be regarded as a long diphthong, 82 this should be strictly differentiated from the two other forms of long diphthong (as does Kuryłowicz, Etudes, p. 40), viz. that from lengthening and that from contraction. An example of the latter is the dative singular of the o-stems ending probably in $-o-ei > -\bar{o}i$. A lengthened diphthong may be seen for instance in the nominative singular * $Di\dot{e}us$. One therefore has long diphthong:

- (1) from contraction e.g. dat. sg. o-st., -o- $ei > -<math>\bar{o}i$;
- (2) by lengthening e.g. nom. sg. $*Di\acute{e}us$; sigm. aor. $*\acute{e}-l\~{e}ik^u$ -s- η > Skt. $\acute{a}r\~{a}ik$ \$sam;
- (3) through laryngeal e.g. $e\hbar_2 i V >$ (in sep. languages) $\bar{a}i V$.

It is in this light that the rule that long diphthong before consonant, i.e. phonetically, loses its diphthongal element in PIE and becomes a long vowel must be seen. The last group of 'long diphthongs', which were the result of laryngeal, therefore do not occur before consonant as such, for they become — phonetically — short diphthongs $(\pi \circ \iota \mu \dot{\eta} \nu)$. And yet the rule is based for a part on these roots, owing to the fact that the enlarged roots before vowel $(e\hbar_2 i - V > \bar{a} i V)$ were compared with the non-enlarged roots before consonant $(-e\hbar_2 C > -\bar{a}C)$. Strangely enough, this again is not found sharply enough in Kuryłowicz, *Apophonie*, p. 257, where he states that it is 'plutôt

⁸² The definition of diphthong is not very clear-cut. See for the whole problem Meillet, *Introd.*⁸, pp. 105-25, in particular p. 110.

probable' that π ωμα is the full grade without *i*-enlargement. For Gr. π ωμα cannot come from * $p\bar{o}i$ -, * $pe\hbar_3i$ -, since this would have become * π οιμα. PIE loss of the *i* in * $pe\hbar_3$ -i-m- is refuted by the type π οιμήν.

That the second category of long diphthongs was preserved down to the separate languages is demonstrated by the examples given, Skt. *Dyáuḥ* (Ζεύς shortened from *Ζηυς in accordance with Osthoff's Law, Lejeune, *Traité*, pp. 188 f.). The accusative of this same word, Skt. *Dyám*, Lat. *diem*, Zῆν (see p. 150)⁸³ suggests PIE **Diēm*, which will have arisen from **Diéum* (with dissimilation in -*ēum*); **Diéum* itself stands, after the nominative, for the **Diéum* that would be expected.⁸⁴

The first group usually retains the diphthongal element too. The rule therefore has no general validity, but relates only to a few special cases.

The following forms are known of these roots (with for instance \hbar_2):

$$(e\hbar_2 > \bar{a}C \quad \check{a}V \quad \hbar_2 \quad C - C := \vartheta \quad C - V : \text{zero})$$

 $e\hbar_2 i > \bar{a}iV \quad \check{a}iC \quad \hbar_2 i \quad C - C : \bar{1} \quad C - V : \underline{i}$

Reference has already been made (p. 170) to the cognates of $\delta\alpha$ io $\mu\alpha$: Skt. $d\bar{a}ti$ -, diti- $<*d\hbar ti$ -, $dy\acute{a}ti$ $<*d\hbar$ -io- or $*d\hbar i$ -o-; for $\delta\alpha$ io $\mu\alpha$ itself see below. It is the question whether $*d\bar{i}$ - in Arm. ti, ON time 'hour, time' belongs here; this might be based on $*d\hbar i$ -C > $di\hbar$ -C, see below.

Πλέων πλέον is based on *pleħ₁-is-on (like πλεῖστος < *pleħ₁-is-to-, of which the ει stems from πλείων πλεῖον, see p. 171). Cf. Skt. prāyas- < *pleħ₁ios-, and déṣṭha-with disyllabic e from *deħ₃is-; cf. the Introduction, p. 10. In Hom. πλεῖος (for πλῆςς), Att. πλέως, Arm. li, Skt. prāyaḥ 'mostly' we have *pleħ₁-io-. The stem is that of *pelħ₁-/pleħ₁- 'to fill' (πλῆτο, πληθύς, Lat. plēbēs, plētus etc.).

Beside θῶσθαι etc. (Frisk; formation unclear) θοίνη may go back to *dheħ3i-.

A separate problem is formed by the zero grade of these roots with *i*-enlargement, where one finds $\bar{\imath}$. As one would expect that in $C\hbar iC$ the laryngeal would disappear without lengthening (see the following section), metathesis of \hbar and i has been assumed here, as by Hammerich, $Lar.\ b.\ Son.$, p. 35. This solution is a dangerous one: the explanation given by Hammerich of Skt. $p\bar{u}rn\dot{a}$ - (from * $p\bar{h}rna$ - < * $p_r\bar{h}na$ - < * $p_l\bar{h}no$ -) and $\dot{a}s_rk$, $y\dot{a}k_rt$ (p. 37 ff.) already takes this principle too far. Even less happy seems to me the idea of Frei (Cahiers Ferd. de Saussure 16 (1958-9) 9 n. 35) that (for instance) * $p\bar{i}$ - (from * $p\bar{o}$ -, * $pe\bar{h}_3$ - 'to drink') does not go back to * $p\bar{h}_i$ - but to the non-enlarged root * $p\bar{h}_3$ -, after which an 'i de liaison' appeared between the laryngeal and following consonant (* $p\bar{h}_3$ -i-C), which with metathesis gave * $pi\bar{h}_3$ - > * $p\bar{i}$ -. Apart from the fact that one would also expect such an i elsewhere, one would in that case have to explain the \bar{u} as zero grade of $\bar{e}u$, $e\bar{h}u$ by an 'u de liaison'. Here too metathesis is assumed.

This metathesis is not immediately convincing. It is not clear why before e/o the ⁸³ The original accent of *Diéum will, as in the nominative *Diéus, have been an acute one. The circumflex in Greek is a result of the addition of the - α : *Z $\dot{\eta}\nu$ > Z $\ddot{\eta}\nu\alpha$.

⁸⁴ Cf. the discussion in Kuiper, *Notes*, pp. 38 f. and 68-70.

laryngeal would fall, but before i (and u) metathesis would occur. The difference in articulation could therefore be the sole cause of this, but one would like to find indications of such a phenomenon elsewhere. It can only be stated that the lengthening (in the \bar{i}) and the fact that \bar{i} does not seem to occur before vowel point to a group -iħ-C. For the moment another solution is not known. It cannot be denied that there is a difficulty here, but I do not see that the old solution (Schulze's $\partial i > \bar{i}$) is better, as for instance Leumann (Mus. Helv. 14 (1957) 75 = Kl. Schr., p. 260 n. 2) suggests. For, according to the old shwa theory, ∂ would in all situations have become a, also in ai before vowel (even in Indian, where a normally became i; see below). There is no reason why ∂ in ∂i before consonant would have become i. Here too an auxiliary hypothesis is therefore necessary, which finds no support elsewhere. (Moreover, the idea would fit straightaway into the laryngeal theory: $C\hbar iC > CiiC > C\bar{i}C$.) However, the essential thing is that the laryngeal theory has pointed to the predominantly consonantal character of the a; it is therefore improbable that the laryngeal, which even interconsonantally did not always become a vowel, was vocalic in these surroundings (ChiC).

A clear case is the root * $dh\bar{e}$ - 'to suck, give suck', * $dheh_1$ -(i-); * $dheh_1$ -C: Gr. θῆλυς θηλή, Skt. dhārú-, Lat. fēlare (fīlius), Lith. dėlė̃ 'bloodsucker' etc.; *dheħ₁-i-C: Skt. dhenú-'milking', dhenā 'milch cow'; *dhī-: Skt. dhītá-, Latv. dīle 'sucking calf'. Apart from the last one the following forms also present problems here: *dhi- OHG tila 'woman's breast', MIr. del 'nipple'. This could continue * $dh\bar{h}_1$ -i->* $dh\bar{t}$ -, but that would be in contradiction of the explanation given above of *dhī-. Finally there is *dhăi- (?) in Skt. dháyati, OCS doję, Goth. daddjan. The δαίομαι mentioned above belongs to the same category. The form *dai- of this can be explained in two ways: as * $de\hbar_2i$ - (but in that case only before consonant, from which it could then have spread further) and as * $d\hbar_2 ei$ - (Kuryłowicz, Etudes, p. 65). A form * $d\hbar ai$ - of * $dhe\hbar_1$ -, however, cannot be explained in that way, but dojo daddjan may go back to *dhħ1oi-je-; the vocalism of dháyati is unknown (so that *dhħ1ei- is possible). Such problems must be considered morphologically from case to case. The old explanation *dhai->*dhăi-(in terms of the laryngeal theory *dhħi-) should be rejected, since in this position the laryngeal was probably not vocalic. This emerges from forms such as Skt. dyáti 'to share', syáti 'to tie', from * dh_1 -je-, *sh-je-, Kuryłowicz, op. cit., p. 64; cf. for the latter form Hitt. ishianzi (p. 86).85 Moreover, this would also presuppose \hbar (a) > a for Indian, which does not have much support.

The long i is also found in the root of oipóv 'ploughed furrow' (*seħ3ir-): Skt. stra- 'plough', sttā 'furrow' (*sħ3i->*siħ3-?).

The best-known case is the root * $p\bar{o}$ -(i-) 'to drink', * $pe\hbar_3$ -(i-). This form occurs only in Skt. $p\bar{a}y$ - $\dot{a}yati$ ('to cause to drink'). In addition one finds the non-enlarged root * $pe\hbar_3$ -, $\pi \omega \omega$, Lith. puota 'drinking-bout', Lat. $p\bar{o}tus$, $p\bar{o}culum$, Skt. $p\dot{a}tram$ $p\bar{a}t\dot{a}r$ -. As the zero grade we find * $p\bar{i}$ -, Skt. $p\bar{i}t\dot{a}$ - $p\bar{i}t\dot{i}$ -, OCS piti. The Greek forms have been

⁸⁵ Thus for Av. xvāng 'of the sun', having regard to ἠέλιος < *seħ2 ψ -el-, I would be more inclined to assume *sħ ψ -ens than *suħ-ens, as Kuiper does, Notes, p. 34, n. 2.

interpreted by Leumann (loc. cit.). Comparing the ablaut δω-/δο- from δίδωμι, he starts from an interchange * $p\bar{o}$ -/ $p\bar{i}$ -, e.g. in the athematic agrist *e- $p\bar{o}$ -m (Skt. $ap\bar{a}m$): *e- $p\bar{i}$ -mes. It is assumed that these two stems can still be seen in Aeolic $\pi\tilde{\omega}\vartheta_i:\pi\tilde{\iota}\vartheta_i$. The thematic agrist ἔπιον is said to have had its starting-point in 3 pl. *e-pī-ent> *έπιεν. However, the reconstruction of this agrist seems to me to be based on too weak grounds. After all, parallel to $\delta\omega$ -/ $\delta\sigma$ - one cannot expect anything but (Gr.) $\pi\omega$ - $/\pi\sigma$ - (* $pe\hbar_3$ - $/p\hbar_3$ -; or, as * $p\bar{o}$ - $/p\bar{o}$ -, possibly $\pi\omega$ - $/\pi\bar{\alpha}$ -). The interchange * $p\bar{o}$ - $/p\bar{i}$ - can only be explained by an original system * $p\bar{o}i$ -($p\check{o}i$ -)/ $p\bar{i}$ -, but there is no indication of * $p\bar{o}i$ - in the agrist. Thus, if $\pi\tilde{\omega}\vartheta\iota/\pi\tilde{\iota}\vartheta\iota$ does indicate such an agrist, the latter must itself already be secondary. The same problem occurs in the present forms. Parallel to δίδωμι, Leumann assumes *pipōmi *pipīmes, of which he asserts that Skt. pibati is the thematic transformation. However, this transformation usually proceeds from the 3 pl., which in this view would therefore have been *pi-poj-enti, which in all languages would have become *pipaienti (possibly *pi-pai-nti > *pipaiati). It is clear that one must start from the root without i: *pi- $pe\hbar_3$ -mi *pi- $p\hbar_3$ -mes 3 pl. *pi- $p\hbar_3$ -ntipibati. In this way the $b < ph_3$ is also explained. The correctness of this explanation is rendered probable by the Vedic forms:

	act.	midd.
3 sg.	pāti (<*pipāti?)	pipīte
3 pl.	pibati	pibate/pipate

The 3 sg. midd. must have been *pi- $p\hbar_3$ - $toi > *pip\bar{t}te$; the long i is based on Indian lengthening, as in $pun\bar{t}te$. Here, therefore, the p did not become voiced, since \hbar_3 here did not stand before vowel but itself became vocalic.

The Sanskrit present forms thus point to * $pe\hbar_3$ - $/p\hbar_3$ -, from which the transition to the thematic declension also becomes demonstrable. However, forms like $p\bar{\imath}t\dot{a}$ -, $\pi\bar{\imath}\vartheta\imath$ must ultimately go back to * $p\hbar_3i$ -.

As stated, the original zero grade in *pō-, *peħ3- must have been *pħ3- i.e. in the European languages *pǎ-. There is no trace of this (for OCS pojǫ 'to cause to drink' cf. dojǫ supra). One therefore hesitates to take Gr. π o- for *pħ3- (e.g. Leuman, loc. cit.). And yet it would be easy to understand that an original European *pǎ-(<*pħ3-, *pō-) was replaced by *pō- (or *pī-), and Indian *pu- (<*pħ3-) by *pī-(<*pħ3-<*pħ3i-), and that *peħ3-/pħ3- was preserved only in Greek, where π ω-/ π o-(like δω-/δο-) conformed to the same ablaut scheme as \bar{a}/\bar{a} , η/ϵ . The forms with π 0 admit very well of this interpretation: π οτόν 'that which one drinks, drink' (π οτός 'drunk, for drinking', A., E.), π όσις 'drinking', π οτής 'drink' II.; more recent π ότος 'carousal' Cratin., X., π ότιμος Hdt., Hp., π οτήριον inscr. ?700, Alc., Sapph., π ότηρ 'drinking cup' E., π ότις (π ότης) 'drinker' Phryn. (Ar.); π όμα Pi. N. 3.79, Hdt., Hp. for π õμα A., S., E. For the oldest stage π ῖνον 'liquor' Arist. and π ίστρα 'drinking trough' E. are not of importance in my opinion. These data indicate that π οτός (π οτόν) was the starting-point of a number of derivations and that π οτός and π όσις were the oldest forms of this group (still including οἰνοποτάζω II.); π 0- became

characteristic of the nominal forms and even $\pi \tilde{\omega} \mu \alpha$, the only Greek word with $\pi \omega$ as against Skt. $p\tilde{a}t\acute{a}r$ - $p\acute{a}tram$ $p\tilde{a}nam$, was replaced by $\pi \acute{o}\mu \alpha$. In these two forms zero
grade is normal and if $\pi \sigma \tau \acute{o}\varsigma$ ($\pi \acute{o}\sigma \iota \varsigma$) is compared with $p\bar{\iota}t\acute{a}$ - ($p\bar{\iota}t\acute{\iota}$ -), Lat. $p\bar{\sigma}tus$, Lith. $puot\grave{a}$, it seems probable that $\pi \sigma \tau \acute{o}\varsigma$ continues an original * $p\hbar_3t\acute{o}$ -, which was replaced
elsewhere by $\bar{\iota}$ (for $\check{\iota}$, or u) and \bar{o} (for \check{a}) respectively. There is little to be said about
the age of forms like $\mathring{e}\pi\acute{o}\vartheta \eta \nu$ A., $\pi \epsilon \pi \acute{o}\sigma\vartheta \alpha \iota$ Thgn. (and $\pi \acute{e}\pi \omega \kappa \alpha$ A.). They could have
been built on $\pi \sigma \tau \acute{o}\varsigma$. In this form $\pi \acute{e}\pi \omega \kappa \alpha$ is a Greek creation, having regard to the κ .

Πίθι Cratin. is in any case older than Aeol. π ῶθι, since here zero grade is normal. However, there is no certainty about the age of the long i (Sanskrit has $p\bar{a}hi$). The question is therefore in which forms * $p\bar{i}$ - was original. It should also be pointed out that the 3 pl. of an athematic aorist would have been *e- $p\hbar_8$ -ent (>* ϵ πεν with analogic ϵ for * ϵ πον), a form that was not very clear and could easily be replaced.

An isolated case of laryngeal before u is $\beta o \delta \zeta < *g^u o \hbar u s$ (* $g^u \acute{e} \hbar_3 u s$?); see Kuiper, Notes, pp. 32 ff.

Perhaps yovat-, Arm. kanai-k', has ai from $e\hbar_2$ -i.

We should also discuss here the words with αv , αt , Schwyzer, p. 347b. On the one hand borrowing is possible here ($\tau \alpha \tilde{v} \rho o \varsigma$, p. 134), on the other hand, however, $-e\hbar_2 - u$ -or $-\hbar_2 e u$ - may have been the origin.

In the first place there is the interchange with $\omega(\upsilon)$ in τραῦμα A.: τρῶ(υ)μα Hdt., Hp. and θαῦμα II.: θῶμα Hdt. Θαῦμα has no cognates outside Greek. The supposition that θαῦμα/θῶ(υ)μα goes back to two different basic forms (*dhəu-/dhōu-, Frisk s.v.) does not inspire confidence. If the connection with θάμβος is correct, one finds the following stem forms side by side: θαφ-? (τάφος ταφεῖν): θαβ- (with prenasalization in θάμβος): θαπ-? (τέθηπα): θᾶϝ-/θω(ϝ)- (θῆβος = θηϝος?, *θᾶϝᾶ see Frisk s.v. θεά, θαῦμα, θῶ(υ)μα). This points to a non-IE word; see Kuiper, Μνήμης χάριν, I, p. 225.

Recently Frei (Cahiers De Saussure, 16 (1958-9), 1-22, 17 (1960) 47-53 and 19 (1962), 87-91) has repeated the attempt to connect * $p\bar{o}$ - with * $\bar{a}p$ - 'water' on the strength of a reconstruction of a meaning 'to flow' for * $p\bar{o}$ -. He now posits a root * \hbar_2ep - 'couler' > 'courant d'eau, riviére, eau' and connects this with * $p\bar{o}$ -, * $pe\hbar_3$ - as * $\hbar_2ep-\hbar_3$ -/ $\hbar_2p-e\hbar_3$ -. This seems to me impossible, since the second form in Greek would have been * $\dot{a}\pi\omega$ -. Skt. $p\dot{a}yate$ is also taken here as * \hbar_2pei -, though semantically speaking it should preferably be left as * $pei\hbar$ - connected with $\pi\bar{a}ap$ etc., see p. 169. The connection with ab-in European names of rivers (* $A\beta\alpha$) π 0 or π 10 of the semantically speaking it should preferably be left as * $pei\hbar$ - π 10 on one connected with $\pi\bar{a}ap$ etc., see p. 169. The connection with ab-in European names of rivers (* $A\beta\alpha$) π 0 or π 10 of π 21. Abonā, OIr. π 32 of π 33 with π 42 of the European names of rivers see p. 135). Finally, as Frei remarks, one would expect not π 43 the European names of rivers see p. 135). Finally, as Frei remarks, one would expect not π 43 of the European names of rivers see p. 135). Finally, as Frei remarks, one would expect not π 43 no one which assumes that the laryngeal had already vanished or had disappeared by dissimilation with the following one, is not convincing: the first is at variance with π 42 interesting π 43 again prohibits the connection with European π 45.

87 The long article by Szemerényi, Glotta, 33 (1954), 238-65, in which he defends *dhmbh-/dhmsy-as PIE basic forms, is not a happy one. It consists of a series of improbabilities, of which the following may be mentioned. The phonetic law mbh > Gr. μ is (further) based on θρόμβος, of which, however, the μ is unexplained if it belongs with τ ρέφω; if it does not, it loses its value; the same applies to π ύνδαξ as against π υθμήν. The law is refuted by words like ὀμφαλός, see p. 74. The idea of foreign origin of these words is an obvious one, certainly in comparison with words like κόρυφος — κόρυμβος (with which κόρυνθος is probably connected), where the m cannot possibly be interpreted as PIE

If τραῦμα is the original form, τρῶμα can be understood by the association with τιτρώσκω. In view of τορεῖν, the form τιτρώσκω seems to have a root * $ter\hbar_3$ - (p. 233), so that τραῦμα cannot have been derived from it. Boisacq places s.v. τείρω the following forms together: τρᾶ-(νής), τρη-(τός) τέρε-(τρον), τρω-, τρί-(βω) and τρύ-(ω, - χ ω, -πάω). This would lead to * $ter-\hbar_1/\hbar_2/\hbar_3$ (with * $tr-\hbar-i/u > tr-i/u-\hbar-?$), so that * $tre\hbar_2u-m_p$ > τραῦμα is possible, but such an interchange of enlargements is not willingly accepted.

If the analysis of these two words is correct, this shows how misleadingly loan words can be fitted into the framework of one's own language.

The old derivation of for instance $\tau \rho \alpha \tilde{\nu} \mu \alpha$ from *trəu- seems possible in itself, but contradicts the development $\partial i > \bar{i}$, $\partial u > \bar{u}$ assumed by Schulze. However, in the light of the laryngeal theory, having regard to the phonetic properties of the laryngeal (that is to say of the ∂), a form *tr\(\bar{v}u\)- is not probable: one expects here the laryngeal in consonantal function. For the development of *tr\(\bar{h}_2u\)- (>*\ta\(\rho\varphi\)-) see p. 216.

For φάος $<*\phi$ ά-Foς, cf. Skt. *bháti* 'to illuminate', a structure $*bh\hbar_2u$ - is conceivable (since here the laryngeal is preceded by an occlusive and not a sonant), but it is more probable that the laryngeal was consonantal in this position too; v. supra. As a result ϕ αυ- (π ι ϕ αύσκ ω II.) will be based on $*bh\hbar_2$ -eu-.

A difficulty is formed by the connection of χάος χάσκω with OHG giumo, which points to e-vocalism, $*\hat{g}h\hbar_1$ -eu-; $*\hat{g}h\bar{e}(u)$ - in OHG gëwon.

A laryngealistic explanation for $\alpha \tilde{v} \circ \varsigma$, Lith. $sa\tilde{u}sas$ (* $se\hbar_2us$) would imply that in * $s\hbar_2us$ -, Skt. suska, a development $\hbar u > u\hbar > \bar{u}$ did not take place.

⁽an opinion shared by Frisk). The m of *dhembh- is based on θάμβος; the fact that this has no e-vocalism has its parallels, but with zero grade one would expect *ταφος. Szemerényi explains it as a derivative of θαμβέω, but this could only be explained as transformation of the intensive *θομβέω (according to ταφών). However, there is no parallel of such a transformation, so that in my opinion θάμβος cannot be explained from *dh(e)mbh-. The perfect τέθηπα instead of the expected *τέτηφα (the analogic η being accepted), is explained by aspiration interchanges like κιθών/χιτών, φάτνη/πάθνη, βάτραχος/βάθρακος, ἄκανθος/ἄχαντος (Lejeune, Traité, p. 50). However, these words all convey the impression of being of non-IE origin. It is highly improbable that the last form of a system ταφών — *τέτηφα would have disappeared without trace, given the abundance of perfects with a stem ending in φ . Szemerényi's explanation of θωῦμα as a personal venture by Herodotus on the (sole!) example of Ion. τωὺτό as against Att. ταὺτό is, of course, entirely unacceptable. It may incidentally be remarked that there is no compelling reason to interpret the β in ϑ ῆβος as F.

IX. AFTER CONSONANT BEFORE VOWEL

Laryngeal after consonant before vowel disappeared without trace in Greek, apart from possible colouring of following e. This development is evidenced by among others the Greek cognates of the two words celebrated in the history of the laryngeal theory, Skt. pṛthúḥ and pánthāḥ, of which the former was explained in 1891 by De Saussure.

The comparison of Lith. *platùs* with Skt. *prthú*-, Gr. πλατύς leads to the following reconstruction of the PIE paradigm:

```
sg. nom. *pl\acute{o}t\hbar_2-u-s gen. *pl\acute{o}t\hbar_2-\acute{e}u-s
```

In the same way Pedersen (KZ 32 (1893) 269; Cinq. décl., p. 54) explained pánthāḥ (Lat. pons):

```
sg. nom. *pont-ėħ<sub>1</sub>-s (Skt. pánthāḥ) gen. *pnt-ħ<sub>1</sub>-ós Skt. pathás pl. instr. *pnt-ħ<sub>1</sub>-bhis Av. padəbīš (Skt. pathíbhis)
```

In Greek one finds traces of this paradigm in the words π óvτος π άτος (the latter form could be the phonetic representation of the genitive). Here too there is no trace of the (antevocalic) laryngeal in Greek. (Cf. the Introduction, p. 9.)

None of the forms of * $st\bar{a}$ -, * $ste\hbar_2$ - has aspiration in Greek, while this has become general in Indian. $\Sigma \tau \alpha \nu \rho \delta \varsigma$ is of particular importance here if it goes back to * $st\bar{h}_2$ -eu-, rather than to * $ste\bar{h}_2u$ -; cf. p. 177 f.

The same may be found in ὀστέον as against Skt. ásthi, but here the original declension is less clear: $*\hbar_2 \acute{o}st-\hbar-i$ $*\hbar_2 st-\hbar-ei-s$ Kuiper, Notes, p. 63, comparing

ὄστρακον: ἀστράγαλος, but these words, having regard to their suffix, seem more likely not to be IE; cf. p. 51; in that case there is no indication of \hbar_2 . Hamp, Word 9 (1953) 135-41, thinks differently.

If Kuiper's connection (Glotta 21 (1933) 287 ff.) of κλοτοπεύω (only T 148, approximately 'to dawdle') with Skt. śrathnáti śrnthati 'to become soft, etc.' is correct, κλοτ- goes back to *kloth-. However, the structure of *kl-n-eth-mi would be exceptional. For $\sigma \pi$ see p. 194.

Also of importance here is $\mu \dot{\epsilon} \gamma \alpha$. Pedersen, Cinq. décl., p. 47 ff., has reconstructed the paradigm as follows:

```
sg. nom. *me\hat{g}-\acute{e}\hbar_2 (Skt. mah\tilde{a}-) gen. *me\hat{g}-\hbar_2-\acute{o}s Ved. mah\acute{a}s
```

In Gr. $\mu\epsilon\gamma\alpha$ -(λ o-) nothing shows the influence of the laryngeal.

'Eγώ, Skt. ahám is unclear. There is no indication of a suffix -ħom (Kuryłowicz, Etudes, p. 53). The origin of the -ω is not known. One might suppose *e \hat{g} -o \hbar /e \hat{g} -ħ-om. There is no proof of aspiration by \hbar_3 in Indian, which makes *e \hat{g} -e \hbar_3 /e \hat{g} -ħ₃-om uncertain. Only if one were to start from *e \hat{g} ħ-o/e \hat{g} ħ-om does èγώ show that the laryngeal disappeared without aspiration in Greek.

Skt. hánuh as against γ évu ζ presupposes a laryngeal, * $g\hbar_1$ -en-, of which, however, there is no further indication.

Θυγάτηρ as against Skt. duhitá is a somewhat different case. As evidenced by the Indo-Iranian forms, we have here a paradigmatic interchange *dhug \hbar_2 -t-/dhug \hbar_2 -t-(Kuiper, Notes, p. 21 ff.), i.e. interconsonantal laryngeal: in Greek, 9υγ α - in any case does not have the aspiration of Indian. See the Introduction, p. 8.

In the 3 pl. of athematic presents the laryngeal disappeared before the ending -onti, Skt. punánti < *pu-n-ħ-onti as against punáti punīhi. Corresponding to this are κάμνουσι < * $\hbar m$ -n- \hbar 2-onti, τάμνουσι < *tm-n- \hbar 1-onti, forms which facilitated the transition to the thematic declension.

Kuryłowicz has pointed out (Pr. Fil., in particular pp. 209-14) that the apparent exceptions to Brugmann's Law are explained by the original presence of laryngeals. For instance $j\acute{a}na$ - from $*\acute{g}on\hbar_1o$ - (not $*\acute{g}on$ -o-, which would have become $*j\~{a}na$ -). Consequently a laryngeal will also have disappeared in Greek $\gamma\acute{o}vo\varsigma$. In this category there are also a number of compounds of which the second component displays the same phenomenon, e.g. aja- $gar\acute{a}$ - 'goat-swallowing', with which the following comply in Greek:

```
δημο-βόρος (A 231; <*-g^uor\hbar_3o-, connected with βιβρώσκω), εἰροκ-όμος (Γ 387), ἱπποκόμος (Hdt.; *-\hat{k}om\hbar_2o-), δρυ-τόμος (Π 633 etc.; *-tom\hbar_1o-).
```

A laryngeal has also been lost from γένος βέλος (as against βέλε-μνον). Admittedly, apparent aniţ forms of * $\hat{g}en\hbar_1$ - also occur (γέγαμεν), but these can easily be explained as analogic formations; see p. 244. The possibility that seţ and aniţ roots, i.e. roots with and without laryngeal as enlargement (* $\hat{g}en$ -: * $\hat{g}en\hbar_1$ -), existed side by side

cannot be entirely excluded, but one may not avail oneself of it unnecessarily. It is a methodical requirement, in those cases in which the non-enlarged root cannot be imperatively demonstrated, to try to explain the existing forms on the basis of the disyllabic root before taking refuge in the *ultima ratio* of root variants in the protolanguage.

Three cases are stated which are claimed to demonstrate that the laryngeal caused aspiration in Greek too in this position, viz. $\pi\lambda\dot{\alpha}\vartheta\alpha\nu\nu$, and the endings of the 2 sg. aor. pass. in $-9\eta\varsigma$ and the 2 sg. perf. (act.) in -9α .

It is by no means certain that $\pi\lambda\dot{\alpha}\theta\alpha\nu\nu\nu$ 'kneading board or tray' (LSJ Suppl.) belongs with $\pi\lambda\alpha\tau\dot{\nu}\varsigma$ (and therefore has $\theta < t\hbar_2$). WP II 63 connects it with *pelā-, which is hardly more convincing phonetically ($\pi\lambda\dot{\alpha}$ - θ - $<*pl\hbar_2$ -dh- is impossible; see p. 245). Cf. $\pi\lambda\alpha\kappa\dot{\nu}\varsigma$ 'flat cake' and $\pi\lambda\alpha\kappa\epsilon\dot{\nu}\varsigma$ ' $\pi\lambda\alpha\tau\dot{\nu}\varsigma$, broad'. Non-IE origin must be considered: firstly many words for kitchen utensils are Mediterranean and secondly many words ending in - $\alpha\nu\nu$ are non-IE (Schwyzer, pp. 489 f.).

There remain the two endings. The connection of 2 sg. aor. pass. $-9\eta\varsigma$ with Skt. $-th\bar{a}s$ is probably incorrect. Within Indo-Iranian $-th\bar{a}s$ stands alone as against Iranian -ha, -sa < *-so, so that Indian innovation (though probably building on an ending with $t(\hbar)$) seems self-evident. In Greek there is no indication that $-9\eta\varsigma$ is older than the remaining forms of this series ($-9\eta\nu$, -9η etc.). One finds 9η beside an older η -series in intransitive-passive verb forms. The 9 occurs as present formant. Cf. Meillet-Vendryes, *Gramm. comp.*, p. 215, Prévot, *L'aoriste passif en* $-9\eta\nu$, Benveniste, *Origines*, pp. 188-210, in particular pp. 196 ff.

On the other hand, the comparison of 2 sg. perf. act. -9α with Skt. -tha is indisputable. Hitt. 2 sg. pret. -ta will, in view of the parallel form -ti in the present (which must go back to *-thi (-thei?), since PIE -ti would have become -zi), have a laryngeal. PIE $-t\hbar_2e$ gives Skt. -tha, but Gr. -9α would be at variance with the foregoing. Kurylowicz explains -9α by *- $\tau\alpha$ after $\phi \theta \chi$, comparing the generalization in Gothic of -t, which was phonetic after spirant (s, f, h). This is not a convincing explanation, since -9α is found exclusively after σ (starting from $oi \theta \alpha$ and $\eta \sigma \theta \alpha$). According to Frisk, "Suffixales -th- im Idg." (GHA 42 (1936) 2.42 f.), the θ is on the analogy of $-\theta t$. The latest to write on this was Cowgill, pp. 172 f. ($-\sigma \tau \alpha$ after labial and velar became $-\sigma \theta \alpha$).

The question of the tenues aspiratae in general or of the correspondence of Gr. $\varphi \vartheta \chi$ with Indian ph th kh cannot be discussed here. For s+tenuis aspirata at the beginning of the word see Hiersche, Unters.; for Greek pp. 176-231. But, whatever the explanation of $-\vartheta \alpha$ may be, the cases mentioned leave no doubt that the laryngeal after consonant before vowel disappeared without trace in Greek, possibly after colouring following e.

⁸⁸ Κόγχος, which has been connected with Skt. śańkhá-, will be non-IE, in view of κόχλος, Kuiper, IIJ, 4 (1960), 245, n. 45. The form ὀνυχ-, Skt. nakhá-, mentioned by Schwyzer, p. 298, in this connection belongs to another category, since here the other languages point to gh, OHG nagal.

⁸⁹ It is striking that a very large part of the Greek material discussed by Hiersche seems to be of non-IE origin.

X. BETWEEN CONSONANTS

The majority of the cases of laryngeal between consonants are found in the so-called disyllabic roots (*TeRH-C*). Here the preceding consonant is usually a sonant, as a result of which complications occur in the zero grade (*TRH-C*). It therefore seemed best to discuss the disyllabic roots as a whole in a separate chapter (Chapter XI). The result is that most of the cases that belong in this chapter will be dealt with in the next one, so that the problem discussed here must be viewed in its relation to the following one. Consequently no conclusion can be given here; this may be found in the final conclusions, p. 265.

Here, then, we shall confine ourselves to those cases forming no part of a disyllabic root; usually an occlusive precedes them. The laryngeal in the position stated is usually represented by a vowel in Greek. The question that must be asked here is whether one must start from consonantal or vocalic laryngeal in the basic language. Thus Iranian points to a paradigmatic interchange of \hbar_2 and \hbar_2 in the basic word for $\pi\alpha\tau\dot{\eta}\rho$; Introduction, p. 8. It must therefore be asked whether the Greek α is based on generalization of \hbar_2 or whether the \hbar_2 was vocalized phonetically. That the latter was the case is evidenced by the disyllabic roots (TeRH-C; see p. 227 ff.) and for instance $i\epsilon\rho\dot{\phi}\varsigma < *is\hbar_1r\dot{\phi}s$ (infra). However, there are indications that the consonantal laryngeal was not always vocalized in Greek ($i\rho\dot{\phi}\varsigma$). It goes without saying that \hbar , which was a vowel in the proto-language, was a vowel in all languages.

The vowel that represents the laryngeal is an i in Indo-Iranian and an a in the other languages; 90 Greek, however, retained the original opposition between the three laryngeals and has $\hbar_1 > \varepsilon$, $\hbar_2 > \alpha$, $\hbar_3 > o$. To demonstrate this is one of the principal objectives of this chapter and the next one, while the question should also be considered of whether all dialects display the same development here.

The material that contradicts this view is very scanty (Schwyzer, pp. 340 f.). The connection between ματεύω μαίομαι (μαιμάω?) and μῶμαι is too uncertain to be able to serve as an argument. (Moreover, μἄ- cannot go back to * $m\hbar_2$ -; see p. 245.) The connection between σαχνός (Gal.) 'tender' (κρέα) and κατασώχω (Hdt.) 'to rub to pieces, pound' cannot offer any argument. For in general ω/α is no proof, since ω can be an apophonic form of $\bar{\alpha}$ which may not be known (in this case * $s\hbar_2gh$ -/ $so\hbar_2gh$ -is therefore possible); but the word does not have any etymology at all. For χατέω

of In Germanic u (see p. 187) sometimes appears, which is left out of consideration here.

χατίζω (Hom.; χάτις χάτος Boisacq, Schwyzer do not occur, only χατίς ἐπιθομία, χρῆσις Hsch.) a connection with *χῆτος (χήτεϊ Hom.) χῆρος is, however, self-evident. But it is impossible to connect these words with χάος, since this seems to have a stem χαρ-/χαυ-. In that case the origin of the η of *χῆτος is also unknown (unless it is assumed that these words have the root in common). The connection of ἁβρός with ἥβη is semantically possible but formally difficult: Lith. jega would suggest * jeh_1-g^n -, but in that case one would expect * ih_1g^n -> *iβ- rather than * jhg^n -in the zero grade. It therefore seems more probable that one has to start from * jeg^n - jeg^n -. Cf. p. 246. For γλῶσσα γλάσσα see p. 246.

Some aorist forms with α in the root, also where the full grade has \bar{e} , seem to present a difficulty here. Of the type $\pi \dot{\eta} \gamma \nu \nu \mu \iota \, \dot{\epsilon} \pi \dot{\alpha} \gamma \eta \nu \, (\sigma \dot{\eta} \pi \omega, \tau \dot{\eta} \kappa \omega)$, $\pi \tau \dot{\eta} \sigma \sigma \omega \, \ddot{\epsilon} \pi \tau \alpha \kappa \sigma \nu$ only $\mu \eta \kappa \dot{\alpha} \rho \mu \alpha \iota \mu \alpha \kappa \dot{\omega} \nu$ could go back to * $m\bar{e}$ -. But here and in the case of $\dot{\rho} \dot{\eta} \gamma \nu \nu \mu \iota \, \dot{\epsilon} \rho \dot{\alpha} \gamma \eta \nu$ and $\tau \mu \dot{\eta} \gamma \omega \, \tau \mu \dot{\alpha} \gamma \epsilon \nu$ with $\eta < \bar{e} / \ddot{\alpha}$ after sonant, the zero with $\ddot{\alpha}$ does not go back to * $\mu \dot{\eta} \dot{\eta}_{1g}$ - (etc.), since these forms would have acquired a long vowel phonetically (and in this way would have become equal to the full grade); see p. 245. The forms with $\ddot{\alpha}$ must therefore be analogic and it is easy to understand that here a zero grade distinguished from the full grade was created secondarily. Most of these forms do not seem to go back direct to a PIE basic type.

The material showing $h_1 > \varepsilon$, $h_3 > 0$ is likewise scanty.

The reading ἀσκεθής is too disputed to be reliable (see Frisk).

The interpretation of εὐθενέω (A.)/εὐθηνέω (h.Hom., Hdt.) is too uncertain to offer an argument here; see Frisk, I, p. 586 f.

μέτρον from * $m\bar{e}$ -, Skt. $m\acute{a}ti$, cannot go back to * $m\hbar_1 trom$, since this would have given * $\mu\eta$ -. A form * $m\hbar_1 trom$, with vocalic laryngeal after sonant, is not probable. One must therefore start from * $m\hbar_1$ -etrom; cf. Ved. $d\acute{a}tra$ - < $*d\hbar_3$ -etro-, $dh\acute{a}na$ - < $*dh\hbar_1$ -eno-.

μακρός is difficult; μῆκος may represent * $me\hbar_2\hat{k}$ os, but * $m\hbar_2\hat{k}$ - would also have been μ $\bar{\alpha}$ -(μη-). Lat. $m\bar{\alpha}cer$ cannot go back to * $m\hbar_2\hat{k}$ - either (one would expect * $m\bar{\alpha}c$ -). Av. masah- 'length', comp. $masy\mathring{a}$, superl. $masi\check{s}ta$ -, cannot go back to * $m\hbar\hat{k}$ - (this would have given *mis-). Phonetically speaking the only possibility seems to be * $m\hbar_2e\hat{k}$ - > * $ma\hat{k}$ - (in all languages), * $m\hbar_2\hat{k}$ - > μηκ-ιστος. In that case Avestan would have generalized the full grade. However, the adjectives ending in -ro- usually have zero grade (ἐρυθρός, ἀργός — Skt. $rjr\acute{a}$ -), and the neuters ending in -os full grade. The whole remains unclear.

It has already been pointed out that πο- in ποτός πόσις may go back direct to * ph_3 -; p. 175 ff.

δοχμός (II.) 'aslant' is connected with Skt. *jihmá- 'idem*', despite the difficulty of the anlaut (<*zizhma-<*dizhma-?). The stem vowel must then go back to a laryngeal, * $d\hbar_3 \hat{g}h$ -mo- (or * $d\hbar_3 \hat{g}h$ -mo-?). Assimilation from * $\delta\alpha\chi\mu$ ός is an arbitrary assumption: there are dozens of words with such vocalism and the same structure (Schwyzer, p. 492).

⁹¹ Is the laryngeal responsible for this unusual development?

A case of exceptional importance is ἱερός. The distribution of the various forms of this word in the inscriptions was investigated by Locher, *Unters.*, pp. 5-8. It was found that ἱερός occurs in Mycenaean (*ijero(jo)*, *ijereu*, *ijereja*, *ijerowoko*), Arcadian, Cypriot, Attic and Ionic (Western, Central, and Southern East Ionic — Miletus before 500 —); ἱαρός in Doric, NW Greek and Boeotian (probably from NW Greek) and Pamphylian (possibly under Doric influence); ἱρος on Lesbos and (ἱρός) in Northern East Ionic (Abdera, Thasos, Chios). Thessalian has ἱαρ- once, and for the rest ιερο-

The conclusion imposes itself that we are concerned here with a dialectically different development, in which $i\alpha\rho\delta\varsigma$ belongs in West Greek, $i\rho\delta\varsigma$ in Aeolic (going from there to Northern East Ionic?) and $i\epsilon\rho\delta\varsigma$ elsewhere. It must, however, be admitted that $i\rho\delta\varsigma$ cannot be shown in Boeotian and Thessalian and that Thessalian has $i\epsilon\rho\delta$, which would have to be ascribed to Ionic-Attic influence. Anticipating what follows, I believe that this material indicates that the dialects still had the form $i\epsilon\hbar_Ir\delta s$, that this developed to $i\epsilon\rho\delta\varsigma$ in West Greek and to $i\epsilon\rho\delta\varsigma$ in East Greek, whilst $i\rho\delta\varsigma$ might be Aeolic, from where it spread to Northern East Ionic.

The aspiration, which is absent only in areas with early psilosis, shows s. The immediately preceding stage was therefore *iseros isaros isros. Such an interchange of forms is very rare. However, one does find -αρος and -ερος side by side in μιαρός Hom.: -ερός Call.; βριαρός Hom.: -ερός inscr. of Rom. period; σκιαρός Pi., Pl.: -ερός Hom.; χλιαρός Epich., Hdt.: -ερός Alem.; πιαρός Hp.: -ερός Hp. (forms after Locher, op. cit., p. 13 f.). The ratio for this interchange is not known. It is striking that all have -ια/ερος. This suggests influence of ἱερός/ἱαρός (so Schwyzer thinks, p. 482; cf. especially p. 243 f.). Schwyzer traces the forms of ἱερός back to an old neuter, as with ὕδερος Hp.: ὑδαρής Hp.: ὕδρος Il. from ὕδωρ etc. In itself this is of course possible, but the geographical-dialectal distribution is not explained in this way. This points to dialectally different development of one and the same basic form. That is confirmed by Ved. iṣirá- 'vigorous, lively'. The semantic side now forms no further problem. The Greek word, divided by W. Schulze, Quaest., pp. 207 ff., into four etyma, is now interpreted as "worin sich eine besondere, über dem Menschen stehende 'Macht' wirksam erweist' (Locher, p. 64, with specifications such as "ausserordentlich stark" (of a town), "- bewegt" (of a river), "von unvergleichlicher Impulskraft''). This meaning is consistent with that of iṣirá-, which has a cognate in ișnáti 'to bring into violent motion'. The connection is established beyond any doubt by the corresponding connection in ἱερὸν μένος and Ved. iṣiréṇā mánasā (instr.); for a recent view of this syntagm see Schmitt, Idg. Dichterspr., pp. 88-90. The connection with iṣṇāti points to a disyllabic root *isħ-. This leads to the reconstruction *ishrós, from which ἱερός can also be derived, provided that *ish₁rós is assumed. The Aeolic form, which must go back to *isros, has therefore lost the consonantal laryngeal. The same phenomenon is found in the Thracian river name⁹² *Ιστρος⁹³

⁹² For the connection with rivers cf. ἱερὸν ῥόον 'Αλφειοῖο Λ 726, cf. Hes. Op. 566 and the use in connection with ποταμός κ 351 and Hes. Th. 788.

Būga, Rev. ét. slav., 6, 9f., derives Istr- from *Instr-.

(Hes. Th. 339); for sr-> str- in Thracian (?) cf. Στρύμων, which will stem from the root *sreu- 'to flow'. Perhaps the river name Isara (Celtic?) also belongs here, though it may also belong to the European substratum (in view of the suffixes of the type ar(a), al(a), am(a)).

The Doric form $i\alpha\rho\delta\varsigma$ thus presupposes $\hbar_1 > \alpha$. It will have to be examined to what extent Doric thus had a different development from the other dialects. It is conceivable that the α here came into being under the influence of the ρ .⁹⁴

ἄνεμος, which is entirely isolated in Greek and therefore may be mentioned here, is dealt with under the disyllabic roots.

I see no phonetic basis for Cowgill's idea (p. 154) that \hbar_1 and \hbar_3 became ϵ and o respectively only in the vicinity of sonants. As a counter-argument one can point to ἐγείρω etc., see the list on p. 68 f., and the above ποτός δοχμός (and ἱερός, where at least the preceding consonant is not a sonant).

Needless to say, this conclusion will not be used in Chapter XI, since it is itself based on that chapter.

The connection with Celt. *isarno- 'iron' (Gall. Isarno-, OIr. iarn etc.), from which the Germanic words have been borrowed, Goth. eisarn etc., encounters the difficulty of the long i. This could be explained only as Illyrian development of *ei-, Pokorny, KZ, 46 (1914), 292. However, this remains an unverifiable hypothesis. Semantically speaking, Kuiper's interpretation of νώροπι and εὐήνορα (see p. 75 f. of this book), epithets of χαλκός, as 'full of vital energy', would be a neat parallel, for the meaning of ἱερός seems to have been about the same (supra).

XI. AFTER SONANT: THE DISYLLABIC ROOTS

In the sequence consonant — sonant — laryngeal special developments occur. Such a group is found most frequently in the so-called disyllabic roots. The problems that these forms present can best be discussed in their interrelation.

Attention was first drawn to the importance of these roots by De Saussure, *Mémoire*, p. 239 ff. A term of Indian grammarians is used to describe them: set roots, as against the anit roots ('with' and 'without i') on the strength of the comparison of Skt. $t\acute{a}ri$ -tum: $dh\acute{a}r$ -tum, bhavi-tum: $\acute{s}ro$ -tum ($\acute{s}ro$ -<* $\acute{k}leu$ -).

Here the same pointless controversy prevails as referred to in a preceding chapter (p. 89ff.). Hirt reconstructs for these roots basic forms of the type *pelā-; Benveniste (Origines, pp. 147-73), building on De Saussure's hypothesis of the consonantal ϑ (the laryngeal), operates solely with the historically demonstrable forms *pel- \hbar_2 -: *pl-e \hbar_2 -, parallel to *ter-s-:*tr-es-, which he regards as a biconsonantal root *pel- with enlargement (\hbar , s) or suffix ($e\hbar$, es). Thus, according to this view, the 'disyllabic' roots in PIE in no way differed from other three-consonantal roots, but the special development displayed by this group justifies a separate name; consequently the current nomenclature will be maintained, although it is therefore meaningless.

One of the main aims of this book is to demonstrate that the distinction between the three PIE laryngeals was preserved in Greek. Consequently it will be investigated in the following to what extent the disyllabic roots are of importance to this problem. They will therefore be classified on a basis of the nature of the laryngeal. There is the greatest agreement on the development of those with \hbar_2 , while these also form the largest group, so that it seems appropriate to begin with them.

A. DISYLLABIC ROOTS WITH h_2

As the first consonant of the disyllabic roots is usually an occlusive, and the second a sonant, they may be suitably symbolized by *TeRH*.

As stated, there is a large degree of agreement on the development of the disyllabic roots with \hbar_2 . For Greek one assumes:

⁹⁵ It is of course entirely pointless to say that there is an essential difference between these two (with suffix interchange ek/k, en/n etc. is possible, with enlargement (k, n, t) it is not), since the assertion can neither be proved nor refuted; cf. Kuiper, *Notes*, p. 6, n. 1.

full grade I $TeRh_2 > TeRa$

full grade II $TRe\hbar_2 > TR\bar{\alpha}$

and with o-vocalism:

 $ToR\hbar_2 > ToR\alpha$

 $TRoh_2 > TR\omega$

In addition one finds $TR\bar{\alpha}$ at places where one would expect a zero grade, i.e. TRH, while moreover a form $T\alpha R\alpha$ is frequent. The last two forms will be discussed after the survey of the material (p. 189 ff.), but for clarity's sake the form which is regarded here as the original one $(T_{\kappa}^{\alpha}\hbar_{2})$ and $T_{e}R\hbar_{2}$ respectively) has already been stated here and there.

A short survey of the representations found in the other languages is useful for what follows.

In Indian the full grade I appears as TaRi. The i of this is sometimes long, but this is based on an innovation which is unimportant to PIE. The zero grade has $\bar{\imath}r$, $\bar{\imath}r < r\hbar l\hbar$, $\bar{\imath} < m\hbar m\hbar$. The distinction between i and u in $\bar{\imath}r/\bar{\imath}u$ does not go back to PIE (at the beginning of the word only $\bar{\imath}r$, after labials only $\bar{\imath}u$, AiGr. 1, p. 28 and Kuiper, $Die\ Sprache$, 7, p. 15 with n. 4). The forms $\bar{\imath}m$ $\bar{\imath}m$ have their m n possibly through analogy. For forms corresponding to $T\alpha R\alpha$ see p. 208.

IRANIAN has TaR for both the full grade I and for the zero grade (in Avestan this is written ara; the representation of PIE r is written here as ara).

In Balto-Slavic a trace of the laryngeal after sonant may sometimes be found in the stress. Lithuanian has here an acute, $\acute{e}r < er\hbar$, $\acute{a}r < or\hbar$, $\acute{i}r/\acute{u}r < r\hbar$, while PIE r became $i\tilde{r}$. The representation $\acute{i}r/\acute{u}r$ does not point to historical connection with Indian $\bar{i}r/\bar{u}r$, as emerges from the fact that Iranian has an entirely different development (supra).

Serbian has in the zero grade $\tilde{r} < r\hbar$, $\tilde{u} < l\hbar$, $\tilde{e} < r\hbar$ $n\hbar$ (as against \hat{r} \hat{u} $\hat{e} < r$ etc.). In Germanic the laryngeal was usually lost without trace $(ur < r \text{ and } r\hbar)$, but sometimes appears as u (in circumstances to be further determined, see p. 153, 202).

CELTIC has in the zero grade $r\bar{a}$ $l\bar{a}$ $m\bar{a}$ $n\bar{a}$, but also ar al am an (Lewis-Pedersen, pp. 4 ff.; the representation of the sonants is very complicated: one finds in part ri li, and in part ar (ra) al (la) and partly em en, partly em en, but not in all dialects in the same way). The type ara also occurs. (Cf. Watkins, Eriu 18 (1958) 85-101. Hamp, Evidence, p. 227 n. 2, doubts that $ext{ar}$ etc. can be a phonetic representation of $ext{rh}$.)

LATIN has in the zero grade $r\bar{a}$ $l\bar{a}$ $m\bar{a}$ $n\bar{a}$. The reduced grade seems to have had ara, and the full grade era (ora), but the second vowel has in most cases either been weakened or entirely eliminated.

For $ToR\hbar$ one would expect $T\bar{a}Ri$, but no case of this is known to me.

⁹⁷ Burrow's view, Skt. Lg., p. 86, that $n\hbar$ became \bar{a} , but $n\hbar$ becomes $\bar{a}n$, is in my opinion refuted by $dhv\bar{a}nt\dot{a}$.

1. Material for the Disyllabic Roots Ending in \hbar_2

This survey is based on the material in Brugmann, *Grundr.*, I² 1, pp. 417-23 and 473-81, Hirt, *Idg. Gramm.*, 2, pp. 103-47, and Schwyzer, pp. 359-63, and more recent literature. It makes no claim to be exhaustive, although most of the material has probably been collected in this way.

There are only very few cases in which the second consonant of the root is not a sonant but an occlusive.

πετάννυμι Hom. has the forms πίτνημι (Hes. πίτνω), πέτασε, πέπταμαι, πετάσθησαν. The present πίτνημι corresponds to the Indian ninth class (De Saussure, *Mémoire*, p. 240, Benveniste, *Origines*, pp. 159 ff.), cf.

$$pavi-tum$$
 $pu-n-\bar{a}-ti$ from * $peuh$ - * $pu-n-eh-ti$
πέτα-σε $πίτ-ν-η-μι$ from * $peth_2-s$ - * $p_et-n-eh_2-mi$

(The question of the ι remains out of consideration here.) On the agrist πέτασσε, incorrectly analysed as πέτασ-σε (Chantraine, Gr. Hom., pp. 409 f.), πετάννυμι was formed. The origin of the present forms may therefore be sketched as follows:

πίτνη μι Hom. (aor. πέτασσεν Hom.)
$$\rightarrow$$
 πετάω Luc.
$$\downarrow \qquad \qquad \downarrow$$
 πίτνω Hes. πετάννυμι Ar. \rightarrow πεταννύω X.

(The original system is interspaced.) The perfect $\pi \epsilon \pi \tau \tilde{\alpha} \mu \alpha t$ (II.) has the expected zero grade * pth_2 -. There is no reason why this form should be secondary (Schwyzer, p. 770,6, and recently Frisk, II, p. 520; $\pi \epsilon \pi \lambda \eta \mu \alpha t$ etc. do not of course furnish proof, since here the second consonant is a sonant; the exceptional form therefore points much more towards great age, since its origin can in my opinion hardly be explained by analogy; one would then expect the stem form $\pi \epsilon \tau \alpha(\sigma)$ - instead, which one consequently finds in $\pi \epsilon \pi \epsilon \tau \alpha \alpha t$ (D.S.), $\pi \epsilon \pi \epsilon \tau \alpha \tau \alpha t$ (E.)). A derivative is $\pi \epsilon \tau \alpha \lambda \alpha t$ 'leaf'. Πατάνη 'a flat dish' (Sophr.) could be based on * $p_e th_2$ -, like Lat. pateo, if the connection with this root is correct: one may envisage a loan word here, cf. $\pi \lambda \alpha \theta \alpha t$ ov, p. 181. Assimilation from * $\pi \epsilon \tau \alpha t \alpha t$ (Schmidt, KZ 32.355 f.) is not probable, since words with $T \epsilon T \alpha t$ are frequent ($\pi \epsilon \tau \alpha \lambda \alpha t$), $\sigma \epsilon \alpha t \alpha t$

Entirely parallel is σκεδάννυμι (Thphr.). One finds (δια-)σκίδνημι, σκίδναμαι

(II.), σκεδάσω (Thgn.), σκεδῶ (Att.), σκέδασα (II.), ἐσκέδασμαι (X.), ἐσκεδάσθην (II.). Forms without initial σ- also occur. Derivative σκέδασις (Od.); it is not surprising that one does not find the normal zero grade here (*σκοῖα-?). And yet there is no indication of *skedħ₂- in the related languages; these point rather to a present *sk(ħ₁)-n-ed-mi, con. *sk(ħ₁)-en-d-ō (Av. sčandayeiti).

To this group also belongs ἔπτατο 'to fly' (aor.; II.; πτἄμένη *ibid.*). Coni. πτῆται O 170. The present πέτομαι will go back to * $pet\hbar_2$ -o-. However, in that case one must assume that the thematic vowel e has been restored analogically, for \hbar_2 -e would have given α (in Homer the forms with ε predominate; with o only πέτονται and (ἐ)πέτοντο). The form πίτνω (A.) = πίπτω 'to fall' is perhaps a remnant of the original nasal present. The latter form may have the long ι on the analogy of ῥίπτω, and further be based on *pi- $pt\hbar_2$ -e/o-. For πότμος ποταμός see p. 240.98

However, the great majority of the disyllabic roots have a sonant as the second consonant, representing a type *TeRH*-.

It cannot always be made out for certain whether one is concerned with a set or with an anit root. This is particularly difficult in the case of words isolated in Greek without convincing etymology. The material encountered in the literature will therefore have to be divided among a number of groups on the strength of the reliability of the interpretation, viz. as follows:

- (a) Non-IE words;
- (b) Words that have no disyllabic root;
- (c) Words of which the interpretation is very uncertain;
- (d) Words of which the disyllabic root cannot be demonstrated for certain;
- (e) Words practically isolated in Greek for which the other languages indicate disyllabic root;
- (f) Words of which various apophonic forms occur in Greek which indicate disyllabic root.

It follows from the nature of this classification that the division between these groups is not a sharp one. It will be clear that for the further discussion only the last two groups are of importance.

a. Non-IE Words

A number of words that are involved in the discussion do not have a convincing IE etymology and by their structure suggest that they have been borrowed from a non-IE language.

ἄμαθος (beside ψάμαθος II.; ψάμμος μ 243 (Aeol. ψόμμος, LSJ Suppl.), ἄμμος Pl.). Although cognate with MHG sampt (OHG sant) a form PIE *samədho- is not probable on account of the a in the stem, while ψάμαθος also cannot be so explained. The word seems more likely to be non-IE, cf. Kuiper, Μνήμης χάριν, I, p. 218

⁹⁸ For the semantic side of this connection see R. Schmitt, *Idg. Dichterspr.*, n. 301: the meaning 'to fly' originally in the present (imperfective aspect), 'to fall' in the aorist (perfective aspect).

with n. 34: *(p)sam-/sab(h?) (cf. ψῆφος ψαφαρός, Lat. sabulum); Central European? Cf. in Krahe, $Spr.\ u.\ Vorz.$, p. 58, the elements sal(a)-, albh-, am(a)-, -ma-, with which a form sabh(a)-ma- corresponds in structure.

In this way θ άλασσα beside δαλάγχαν θ άλασσαν Hsch. with interchange θ/δ and $\chi/\gamma\chi$ also points to non-IE origin (cf. Kuiper, Μνήμης χάριν, I, p. 225). (For an entirely different interpretation see p. 209).

 γ ν ά θ ο ς (Ion.-Att.; γ ναθμός Hom.) is connected by some with Lith. \dot{z} ándas < * \dot{g} on h_2dh -, but the form γ νάθος cannot be explained by * \dot{g} n h_2dh - (see p. 245). Analogously κναδάλλεται· κνήθεται Hsch. is connected with Lith. \dot{k} ándu 'bite, sting' positing a stem * \dot{k} on h_2d -. But the comparison of $\dot{\gamma}$ νάθος with κναθ- (cf. also κάναδοι· σιαγόνες, $\dot{\gamma}$ νάθοι Hsch.) points with $\dot{\gamma}$ /κ and $\dot{\theta}$ /δ to a non-IE language. Other members of this group are κνώδαλον (ρ 317) 'wild creature', κνώδων 'teeth on a hunting spear'. Κνώδαλον recalls κνώψ (Nic.), κινώπετον (Call., Nic.; cf. ἑρπετόν) 'venomous beast', κνωπεύς· ἄρκτος. ἔνιοι κνουπεύς Hsch., κυνοῦπες· ἄρκτος (sic). Μακεδόνες Hsch. Further members of this group are perhaps κνάπτω 'to card, comb (wool), full, mangle, tear', κνέφαλλον $\dot{\gamma}$ νάφαλλον $\dot{\gamma}$ νόφαλλον with $\dot{\kappa}$ / $\dot{\gamma}$ and interchange ε/α/ο, which can hardly be based on IE ablaut. For the further connection with -κναίω κνῆν cf. ψαίω ψῆν (with which ψάμαθος is connected, \dot{s} \dot{u} 0, \dot{u} 1 \dot{u} 2 \dot{u} 3 \dot{u} 3 \dot{u} 4 \dot{u} 5 \dot{u} 6 \dot{u} 6 \dot{u} 7 \dot{u} 8 \dot{u} 9 \dot

For the same reason the following group of words, which appear to have been derived from the same root, seem non-IE:

```
κέραφος — σκέραφος — σχέραφος κερβολούσα — σκέρβολος κέρτομος
```

Of the same kind is the interchange κόναβος: κόμπος 'din, clash'.

κνῆκος 'safflower, Carthamus tinctorius' cannot be connected with Skt. $k\bar{a}\bar{n}cana$ as $*k\eta\hbar$ -k-, since this would have given $*k\bar{a}k/c$ - in Indian. Furthermore, OHG honag etc. can hardly be connected with this root. The meaning (the name of a plant) suggests borrowing.

κάλαθος 'basket' is connected with κλώθω 'to spin', which is not very convincing from the semantic point of view. Cf. for the suffix γύργαθος κύαθος λήκυθος and further κάνασθον κάναστρον 'basket'.

b. No Disyllabic Root

For a few words that are sometimes mentioned in this connection the related languages demonstrate that we are not concerned with a disyllabic root.

It is improbable that $\tau \alpha \nu \alpha \dot{\alpha} \dot{\alpha}$ is based on a disyllabic root, in view of Skt. tanvi, not * $t\bar{a}v\bar{\imath} < *t\eta\hbar u$ - $i\hbar_2$. The word occurs in Homer only in Π 589 and in $\tau \alpha \nu \alpha \dot{\eta} \kappa \eta \varsigma$ (only in $\tau \alpha \nu \alpha \dot{\eta} \kappa \kappa \ddot{\alpha}$) beside $\tau \alpha \nu \nu \dot{\eta} \kappa \eta \varsigma$ and ($\mu \ddot{\eta} \lambda \alpha$) $\tau \alpha \nu \alpha \dot{\alpha} \delta \alpha \iota$ 464. Outside Homer its occurrence is also very limited, although a few other compounds with $\tau \alpha \nu \alpha$ - are found. The formation of the word is not clear. The comparison with Lith. tinti 'to swell, breathe heavily' should be abandoned in view of the meaning. However, the similarity to Corn. tanow < *tanawo- is striking. One is reminded of the

incidentally also unclear Lat. $gravis < *g^ur_ewi$ - (as against $*g^u_eru > βαρύς$, infra); ταναρός thus from $*t_en_ew -o$ -? According to Szemerényi, Syncope, pp. 157 ff., ταναρός is built on *ταναρία, the feminine of *τανύς. But in that case the masculine here would have been derived from the feminine at an earlier stage than κραταιός from *κραταια (cf. p. 249 n. 122), since otherwise one would expect *ταναιός. The demonstrable forms do in fact suggest this; besides the fact that the Celtic forms seem to go back in part to *tanawyo- (OIr. tanae etc.), and in part to *tanawo-, ταναρός also occurs in Mycenaean, tanawa 'slender' (description of wheels; see Chadwick-Baumbach, Glotta 41 (1963) 157-270 s.v.).

Nor are $\beta \alpha \rho \dot{\nu} \varsigma$ and Skt. $gur\dot{u}$ - based on a disyllabic root, in view of Skt. fem. $gurv\dot{t}$. Lat. gravis is unclear (* $g^ur_eu\dot{t}$ -?), but in any case not from * $g^ur\hbar$ - $u\dot{t}$ - (* $g^ur\partial u\dot{t}$ -; this would have given * $gr\bar{a}vi$). Skt. gariman- 'weight' is meaningless, since -iman was secondarily extended at an early stage.

γάλα γάλακτος (II.) beside γλάγος (II.), κλάγος γάλα. Κρῆτες Hsch., γλακῶντες μεστοὶ γάλακτος Hsch., γλακτοφάγος and Lat. lac point to *glak(t)-. A disyllabic root is therefore out of the question. It may be doubted whether this word is of IE origin.

c. Words of which the Interpretation is highly uncertain

The interpretation of a few words is so uncertain that they must be left out of consideration further.

That δάμαρ (II.) goes back to the root *demħ₂- 'to build' (Benveniste, *Origines*, p. 30) is not semantically convincing; moreover, * $d_em\hbar_2rt$ - (* $dm\hbar_2rt$ -?) may perhaps have given δάμαρ, but Aeol. δόμορτις γυνή Hsch. presupposes * d_emr -t- instead. See Add. to p. 202.

Fraenkel, Etym. Wb., disclaims any relation between $\delta \rho \bar{\alpha}$ - (δράω δρᾶμα) and Lith. darýti 'to make, do' (causative of derëti 'to serve') or dárbas 'work', dìrbti 'to work'. There is no further indication of disyllabic root for the Greek word.

For $\delta \alpha \rho \vartheta \dot{\alpha} v \omega$ (Hom. only $\xi \delta \rho \alpha \vartheta o v$) Skt. $dr\bar{a}ti$ on the one hand and OCS $dr\check{e}mati$, Lat. dormio on the other hand could suggest $*dr-e\hbar$ -: dr-em- (OCS $*dr\bar{e}m$ -, Lat. *drm-). In that case $\xi \delta \rho \alpha \vartheta o v$ supposes a third enlargement of this root, *dr-edh-(*dr-edh-). There is consequently no reason to assume that this form ever had a larvngeal.

κέραμος 'potter's earth' has no etymology; the connection with κεράσαι is semantically weak.

The connection of τέραμνον (usually pl.) 'chamber, house' (the reading τέρεμνον is uncertain) with Lat. trabs, trabes 'beam, timber', Osc. tríibúm [trēbom] 'domum, aedificium' (with ē), Lith. trobà 'building, house' (with ā) cannot be explained by IE ablaut. Celtic, OW treb 'habitation' and Germanic, OE -brep have *treb-Cf. OBrit. treb 'division of the people', ON borp 'small enclosure, crowd'. The possible connection between these words is, within PIE, unclear from the formal point of view.

ἀτέραμνος 'merciless (Od.), hard' (τέραμνον ἁπαλόν, ἑψανόν Hsch.; τεράμων 'becoming soft by boiling' Thphr.) can hardly be connected semantically with τρ $\bar{\alpha}$ νής 'clear, distinct' (S.). The suffix -αμνο- may suggest non-IE origin, but analysis *terħ₂-mno- remains possible; further connection with Skt. taruṇa- 'tender' should then be considered.

d. Words for which Disyllabic Root cannot be demonstrated

For the following words allowance must be made for the possibility of disyllabic root.

 $\chi \alpha \lambda \dot{\alpha} \zeta \alpha$ 'hail' may be cognate with OCS *žlědica*, Slov. *zlěd* 'glazed frost' as ${}^*\hat{g}h_el\hbar_2d$ -, ${}^*\hat{g}hel\hbar_2d$ -.

χέραδος 'silt, gravel and rubbish (brought down by torrents)' has been compared with Lith. *grúodas* 'frozen rubbish in the street'. Within Greek it may be connected with χαράδρα 'torrent' (= Heracl. χάραδος, Buck, *Gr. Diall.*, p. 373).

κέλαδος 'loud noise, din' has $-(\alpha)\delta$ ος, like many other words indicating a noise, χρόμαδος (infra), ὅμαδος, ἄραδος, ῥοῖβδος, ὀρυμαγδός. Connection with καλέω (see p. 235) is possible only as *kelħ₁- + -αδος. The gloss κέλωρ φωνή Hsch. and κελαρύζειν do not stand in the way of the supposition of a disyllabic root (*kelħ₁- $\bar{o}r/kel\hbar_1$ -r, see p. 202; however, from *kelħ₁-r one would expect *κελερ).

χρόμαδος (γενύων Ψ 688) 'crashing sound', χρεμετίζω (II.) 'to neigh, whinny', χρέμπτομαι (E.) 'to cough' does not suggest disyllabic root if the last form belongs with the others. Χρεμετίζω may have a formative et, like ed in OE grymettan, gremettan, OHG gremizzōn 'to roar' (here, therefore, *gremħ-et- remains possible). For -αδος see s.v. κέλαδος.

στενά χω στοναχή (cf. καναχή) finds support for disyllabic root in Skt. stani-hi, stanáyati ($<*stonh\acute{e}ieti$), abhi-ṣṭaná- (<*stonho-, cf. ἀγάστονος μ 97). Whether the Gallic river name Tanaros belongs here is very dubious.

If the original meaning of $\varphi \dot{\alpha} \lambda \alpha \gamma \xi$ is 'round piece of wood, trunk, log' it could be cognate with Lat. (suf-)flāmen 'clog, break', from *bhlħ2g-s-; Lith. balžiena, OHG balko, OE bealca, ON bolkr from Germ. *balk- < PIE *bholħ2g-? For Lat. fulcio < *bholħ2-k- one should, however, bear in mind the objection of Ernout-Meillet that PIE did not have any roots with aspirate — voiceless consonant (bh — k). However, it is the question whether this also applies to a second enlargement. And yet one must consider non-IE origin for the Greek word, especially in view of the nasal in $\varphi \alpha \lambda \alpha \gamma \gamma$ -.

For $\tau \in \nu \alpha \gamma \circ \varsigma$ 'shoal water, shallows, lagoon' cf. Latv. tigas (< *tingas) 'depression between two shallows', Lith. stingti 'to congeal' (for the meaning cf. Skt. $sty\acute{a}yate$ 'to congeal', $stiy\bar{a}$ 'stagnant water'). However, it is not certain that stingti goes back to $*sty\hbar g$.

βάραθρον, Arc. ζέρεθρον (with $\zeta < \delta$; δ in Hsch.), Aeol. βέρεθρον. The different development of the labio-velar (βα: δε) points to an original opposition between reduced grade and full grade, $*g^u_e r\hbar$ -: $*g^u e r\hbar$ -. One would prefer to ascribe the different forms to dialectal development (cf. p. 183 on ἱερός) (i.e. for instance $*g^u_e r\hbar$ -> δερε-/βαρα-), but there is insufficient support for this (see p. 259 ff.). If the laryngeal was \hbar_2 , then ζέρεθρον βέρεθρον must have been assimilated from $*\beta$ ερα-. But it is also possible that βάραθρον stands for $*\beta$ αρε- $<*g^u_e r\hbar$ - if $e^r\hbar$ 1 became αρε and not ερε: cf. p. 227 ff. The difficulty remains the same if one tries to attach a formative -εθρον to the disyllabic root: both - $\hbar_1 e dh rom$ and - $\hbar_1 dh rom$ give -εθρον, both - $\hbar_2 e dh rom$ and - $\hbar_2 dh rom$ give -αθρον. For the supposed connection with βιβρώσκω see p. 234. The connection with δέρη (Frisk) should be abandoned, on account of both the difference in meaning (δέρη in the first place 'neck') and the form (Aeol. δερα as against βέρεθρον); this word in any case does not have a disyllabic root, as emerges from Arc. δερ_Γα.

It does not seem impossible, partly in view of the meaning, that the word is non-IE. For the structure of the word and the suffix cf. μάραθρον, Schwyzer, p. 533.1, κάναθρον, *ibid.*, p. 532.3, κμέλεθρον/μέλαθρον (p. 215 n. 107 of this book) and σπάλαθρον, *infra*. However, for $\beta/\delta(\zeta)$ one would have to assume a kind of labiovelar in the substratum language. There are in fact various indications of this. These divide into three groups.

- (1) Interchanges of labials, gutturals and dentals in substratum words.
- (a) Interchange of labial and guttural: σπάλαθρον σπαύλαθρον σπάλαυθρον: σκάλαυθρον σκάλευθρον (v.l. σκάλεθρον); for α/αυ cf. ο/ου in ὀλόπτω: ὀλούφω (: λέπω) p. 42, and s.v. ἄλοξ, p. 40; the word — 'oven-rake' — has of course nothing to do with σπάλαξ 'mole' or σπάλαθρον 'a thorn bush'. Further (ἀ)σπάλαξ (ἀ)σφάλαξ: σκάλοψ (or metathesis?); Πυανεψιών Πανόψια: Κυανόψια; Πύδνα: Κύδνα, Πιερόν: Κιερόν; πόρνοψ πάρνοψ: κόρνοψ (a kind of locust), ?βράκαλον βόπαλον Hsch. For βλέπω/γλέπω, βλέφαρον/γλέφαρον (if these last two groups are cognate, they moreover display interchange π/ϕ), βλήχων/γλήχων dissimilatory loss of the labial element of the labio-velar is assumed (Schwyzer, pp. 298 f., Buck, Gr. Diall., p. 75). For the last pair, however, this is out of the question, so that another explanation must also be considered for the other words; cf. the counter-arguments of Lejeune, Traité, p. 38 n. 2. Foreign origin seems obvious (for instance through the meaning of βληχών: the name of a plant). In that case there is a good chance that βλωθρός/γλωθρός (despite West, see p. 215f.) also belongs to this series. In my opinion an other instance is ὀφθαλμός, Boeot. ὄκταλλος, Dor. ὀπτίλ(λ)ος. Frisk's "mit altem $\kappa \tau$, analogischem $\pi \tau$ und expressivem $\varphi \theta$ " does not seem to be the right explanation.

Note the accumulation of difficulties for IE origin in these words: $\lambda\mu/\lambda\lambda$, $\lambda/\lambda\lambda$, α/ι . For -αλμος cf. σχινδαλμός (for which the variants point to a substratum word: σχινδάλαμος, σκινδαλ(α)μός, σχιδαλαμός, σκιδαλ-εύω, σκινδυλεύω; see Hiersche, *Unters.*, pp. 215 f.); for α/ι cf. α/υ in the word just mentioned; the suffix $\upsilon\lambda(\lambda)$ (beside which $\iota\lambda(\lambda)$ is to be expected, in view of ι/υ in these words, cf. - $\iota/\upsilon\nu$ 9-, p. 71) is frequent in substratum words (Schwyzer, p. 485).

- (b) Interchange of labial and dental in substratum words: ἄμπυξ: ἄντυξ, σάμβαλον: σάνδαλον, πεμφρηδών: τενθρηδών, ὀβελός ὀβολός: ὀδελός ὀδολκαί, Περμησσός (Πάρμησσος): Τερμησσός, Παρνασσός: Τερνεσός (the same as the preceding item?), Πευμάττιος: Τευμήσσιος (M. L. West, *Hesiod, Theogony*, pp. 153 f.), ?Βριτόμαρπις (LSJ Suppl. s.v.): -μαρτις.
- (c) Interchange labial/guttural/dental in γέφυρα/βέφυρα/δέφυρα, for which Arm. *kamur-j* points to a substratum word on account of the interchange *bh/m* (Kuiper, Μνήμης χάριν, p. 213).
- (2) The labio-velar that forms the basis of these substratum words may still be pointed to in Mycenaean: qasireu: βασιλεύς, atoroqo: ἄνθρωπος (Kuiper, loc. cit.), qeto: πίθος. The form qaratoro is perhaps the above-mentioned σπάλαθρον. However, karako 'glākhōn': βλήχων is striking. Cf. also the place-name sukirita 'Sugrita': Σύβριτα: see the footnote in Chadwick-Baumbach, p. 245. Myc. apuke (etc.) 'ampuk-' also does not have the q expected from ἄμπυξ: ἄντυξ (for ἄμπυξ in relation to horses LSJ Suppl. now gives the meaning 'bit').

The suffix oπ (Schwyzer, p. 496,3; p. 426 Zus. with n. 4) seems to me also to be an element of the substratum language; it will have developed from ok^u . It is found in the names of animals, which certainly belong to the substratum (σκάλοψ, πόρνοψ/πάρνοψ/κόρνοψ(/ἀκορνός), πηνέλοψ) and in the name of peoples that do not have an IE etymology (ഐ τέροψες, ελλοπες, Δόλοπες), and further in a number of words of which the meaning is unknown (ήνοψ, μέροψ, ?νῶροψ) and perhaps in a few other non-IE words (ἀστεροπή (cf. p. 51), ?καλαῦροψ). Chantraine, Mél. Cumont, pp. 121-8, draws attention to the fact that some names of peoples correspond to those of birds: 治έροπες, Μέροπες, Δρύοπες. His idea that the former were derived from the latter seems correct to me; cf. in Italy the Piceni (picus 'woodpecker' = δρύοψ), Hirpini, ? Lucani.

In my opinion Alθίοπες also belongs here, which therefore does not mean 'with burnt face' (as is still believed by Frisk s.v. α ίθω). This also emerges from the following consideration. The Thessalian name for a people Αἴθῖκες is evidently a formal variant of Αlθίοπες with the same meaning. Apart from the fact that here the meaning 'with burnt face' is much less obvious, this form is not explicable as a compound with PIE ok^{u} - (h_3ek^{u} -) 'face', for * h_2eidh -i- h_3k^{u} — would have given *Alθῖπες, certainly in an Aeolic dialect. Here one must either assume a non-IE element ok^{u} , which was able to give Thess. κ , or another suffix ($i\kappa$); in the latter case too it is probable that $o\pi$ is a suffix with about the same function and not PIE ok^{u} - 'face'. That in this word $o\pi$ developed from ok^{u} emerges from Myc. aitijoqo. Further one finds here pokiroqo (' $poikilok^{u}s$ '), which in my opinion contains the same suffix (cf. aiθός: aiθος: aiθος

It may be this same suffix that is also found with a few perhaps IE stems, e.g. ἠπεροπεύω, κλοτοπεύω (p. 180).

(3) On the strength of the so-called complex signs in the Linear B syllabary (twe two dwe dwo nwa, $tja\ rja\ rjo$) Palmer (e.g. Interpretation, pp. 38 ff.) assumed that the substratum language had labialized and palatalized consonants beside neutral ones, e.g. $k^u: k^i: k$. The most recent to publish on this was Lejeune, Proceedings Cambr. Coll. Myc. Stud., pp. 135-49. See Add.

Many details of the original forms and their development (evidently differing

dialectally or regionally) still call for an explanation. However, this requires a much more detailed examination of the material.

Finally, for the interchange ε/α in βαρα-/ζερε- which can hardly be explained from IE, compare κμέλεθρον: μέλαθρον, σκάλευθρον: σκάλαυθρον, εὐλάκα: αὐλάχα (p. 40 s.v. ἄλοξ), Περμησσός: Πάρμησος, Τερνεσός: Παρνασσός, Γεκεδαμος: Ἀκάδημος (γεκάδαμος).

βάλανος may be based on $*g^u_el\hbar_2-n$ -, but there is no clear indication of disyllabic root. Lat. glans gland-is could represent $*g^ul\hbar nd$ -. The Armenian form, which is the closest to Greek, kalin kalnoy, must have had a vowel e after the l and therefore cannot go back direct to $*g^u_el\hbar_2-en$ -, since this would have become $*g^u_el\hbar_2an$ - as early as the proto-language. However, without \hbar_2 the suffix -an(-d)- can hardly be explained by PIE. Striking is the d-suffix in Latin, Slavic (RussCS želudb < -qdb < -andi) and Albanian ($l\hat{e}nd$), while Lithuanian has $g\hat{e}le$, without n and d. One must consider non-IE origin (for n/nd cf. for instance Kuiper, Mvήμης χάριν, p. 215 ($-a\mu o \zeta / -a\mu \beta o \zeta)$, p. 216 ($-\iota v / -\iota v \vartheta - \varrho d \varepsilon)$ and p. 221 f. ($\vartheta \rho \tilde{\omega} v \alpha \xi / *trond/t$ - in Slavic); for the semantic range cf. $\hat{e}\rho\hat{e}\beta\iota v\vartheta o \zeta$, $\kappa\dot{v}a\mu o \zeta$, Lat. faba).

 $\pi \rho \bar{\alpha} \ddot{v} \varsigma$ (Pi.) will in the first instance go back to *prāiu- (the hiatus from loss of ħ (cf. σῶς, p. 249) or s would already have disappeared). The root syllable may represent full or zero grade (cf. γραῦς, s.v. γέρας, p. 201), i.e. *pr(e)ħ₂i- (*k^ur(e)ħ₂i-?).

e. Words for which Disyllabic Root can be rendered probable

 $\lambda \tilde{\eta} v \circ \varsigma$, Skt. $\tilde{u}rn\tilde{a}$, Av. $varan\tilde{a}$, Lith. vilna, Serb. vina, Lat. $l\bar{a}na$ all point to $*ul\hbar_2$ -n-. If Arm. gelmn is based on $*uel\hbar$ -mn-, the laryngeal must have disappeared. Strange is W. gwlan, explained as *ulana; this form, however, is identical with $*ul\hbar n$ -, for which one would expect the development $l\bar{a}$ in Celtic. MIr. olann has unexplained o. Kuryłowicz, Apophonie, p. 198, presupposes a compound form of $*ul\hbar n\bar{a}$, i.e. $*-uln\bar{a}$; cf. p. 242 ff.

εἰνάτερες 'wives of brothers' (II.; εἰ-m.c.; ἐνατηρ inscr.), OLith. jentė EastLith. intė, Phryg. ιανατερα, 99 Lat. ianitrīces, Skt. yātar- suggest a disyllabic root *jenħ₂-. Greek and Lithuanian would continue *jenħ₂-, Phrygian and Latin *jenħ₂-, Indian, *jnħ₂-. This ablaut doubtless stems from the declension, but the occurrence of three apophonic forms side by side is striking.

κάλαμος has a disyllabic root, as is evidenced by Russ. solóma, Serb. slầma < $*\hat{k}ol\hbar_2mos$. OPr. salme, Latv. salms, OHG halm, Lat. culmus have the same origin. However, there is no reason to assume that κάλαμος was assimilated from *κολαμος, for there are various words with this vocalism, see p. 206. OW calamennou, NW calaf, has the same apophonic form as Greek; however, allowance must be made for the possibility that these words have been borrowed from Lat. calamus (which has itself been borrowed from Gr. κάλαμος).

Forms like * $\hat{k}ol\hbar m$ -o- * $\hat{k}_el\hbar m$ -o and * $p_el\hbar m$ - \bar{a} * $p_el\hbar m$ - \bar{a} (in $\pi\alpha\lambda\dot{\alpha}\mu\eta$ and OIr. $l\dot{\alpha}m$

⁹⁹ However, the form ιανατερα appears in a Greek inscription (from Lydia); J. Keil u. A. v. Premerstein, *Reisen*, I, p. 78, No. 166.

infra s.v. $\pi\lambda$ ήσσω) seem to be thematizations of m-stems, having regard to the interchange in the stem vocalism. The clearest case of an old m-stem is the word for 'earth', Gr. χθών (cf. Kuiper, Notes, pp. 9 f., 86 ff.). Skt. kṣāḥ, Av. zå point here to an original nominative * $\hat{g}h^z\bar{o}ms$. The stem * $\hat{g}h^zom$ - is found in $\chi\theta$ ov- and Lat. humus < *homos; e-vocalism is found in OLat. hemo, stem hem-on-, Lith. žẽmė, ORuss. zemlja and probably also Skt. kṣámi (*ĝh²om-i would have become *kṣāmi), and Phryg. ζεμελω. The zero grade in gen. Av. zəmo, Skt. kşmáḥ (or rather jmáḥ, for which analogically $k \sin h$? for gm h see Mayrhofer s.v.) from $\hat{g}h^2m - \hat{o}s$ and Lith. žmu \tilde{o} 'human being' < * $\hat{g}hm$ - $\bar{o}n$ and perhaps Phryg. Γδαν. The reduced grade is found in Goth. guma $< *\hat{g}h_e$ m-en- and Gr. χαμα- and χθαμα- (χαμάδις χαμαί χαμᾶζε Hom.; χθαμαλός N 683 ι 25 \sim κ 196 λ 194 μ 101). Χθαμαλός is reminiscent of humilis and may go back to * $\hat{g}h^z_e m\hbar$ -lo-, cf. similis — ὁμαλός p. 208, where Greek has o-vocalism, like Latin in humilis; however, in both cases this may be secondary, after ὁμός and humus. The word for 'human being' therefore has the phases *ghem-ghm-on-(hemo guma žmu \tilde{o} respectively). It is not clear whether $*\hat{g}h^z_em$ - has a place in the original declension of 'earth' itself, for which $*\hat{g}h^z\delta m$ - $s\hat{g}h^z\delta m$ -m ($\hat{g}h^z\delta m$ -?) $\hat{g}h^zm$ - δs is, however, certain.

This does not throw much light on the declension of the above words: ${}^*\hat{k}ol\hbar_2m$ $\hat{k}_el\hbar_2m$ - δs (neuter?); ${}^*p_el\hbar_2m$ (beside ${}^*p_el\hbar_2m$) does not, however, seem to be an original nominative. Here too (as with $\chi 9 \omega v$) one is inclined to assume that the three phases formed part of one paradigm ($Tol\hbar m$ - $T_el\hbar m$ -).

κνήμη (Dor. κναμα), OIr. cnāim go back to *knām-. If OHG hamma 'hollow of the knee, ham' belongs here as *konħ2mā, both *kneħ2m- and *knħ2m- may be considered for Greek and Irish (for the ablaut see s.v. κάλαμος).

γέρανος 'crane' corresponds to Lith. $g\acute{e}rv\acute{e} < *ger\hbar_2-μ$. The form $*g_er\hbar$ -n- is contained in Gaul. (tarvos tri-)garanos '(bull with three) cranes', W. garan. Less clear are OHG kran-uh, Lat. $gr\bar{u}s$. (The verb is perhaps found in Skt. $grn\acute{a}ti$ 'to rustle, sing', jarit\acute{a}r- 'singer'.)

¹⁰⁰ The matter of initial consonantism remains out of consideration here; the formulation $\hat{g}h^z$ is followed here without commitment. For literature see *Evidence*, p. 20, n. 73.

κεραΐζω (II.) 'ravage, plunder' is a secondary present; Skt. śṛṇắti 'to break, smash' has the old form. OIr. docer 'he fell' has disyllabic root, - $\hat{k}er\hbar$ -. This stem is further found in ἀκέραιος and κέραυνος, which goes back to *κερα-γαρ/υν- $\langle \hat{k}er\hbar_2-y_r/un$ -. Cf. ἐλαύνω infra.

ν ῆ σ σ α, Boeot. νᾶσσα 'duck' may correspond exactly to Skt. $\bar{a}ti$ - 'a water bird', both from * $\eta\hbar_2ti$ -, while on the other hand Lith. ántis, Serb. $\tilde{u}tva$, Lat. anas (anatis), OHG anut, which all go back in the first instance *anat-, to cannot be separated from this. The two forms probably stem from one paradigm, but the obvious * \hbar_2 en \hbar_2 tis, gen. * $\hbar_2\eta\hbar_2$ téis seems to me to be out of the question, since * $\hbar\eta\hbar_2$ - would have given * $\tilde{\alpha}$ vā- in Greek; see p. 95. All that then remains is the reconstruction * $_e$ n \hbar_2 ti-s ($_e$ n \hbar_2 tis?) * $_\eta\hbar_2$ téis. (For the nominative with reduction vowel $_e$ cf. Kuiper, Notes, p. 19 f.)

 $\sigma \varphi \alpha \rho \alpha \gamma$ - The situation here is complicated. Probably a distinction has to be made between three groups.

- (1) A group of words for 'throat, gullet, gully': (ἀ)σφάραγος, φάραγξ, φάρυγξ, βρόγχος, βρόχθος, βράγχος, βάραγχος, βρακεῖν, βράξαι, βρόξαι. The group seems to be of non-IE origin, cf. Kuiper, Μνήμης χάριν, p. 221.
- (2) The word for 'asparagus' ἀσπάραγος (ἀσφάραγος Att.). The beginning of the word, ἀσπ-/ἀσφ-, and the fact that it is the name of a plant suggest non-IE origin. But if the original meaning is 'the edible shoots thereof' (Thphr.), 'the shoots (of other plants)' (Nic.), a connection with Lith. *spùrgas* 'sprout, offshoot', Skt. *sphūrja*-'plant', Av. *sparaga* 'sprout (at the point of an arrow)' is possible. The basic form **spṛħg* which the latter forms would suggest would have given Gr. *σπρ $\bar{\alpha}\gamma$ -; ἀσπάραγος would have to be based on **spęrħg*-, but the $\dot{\alpha}$ and the interchange π/ϕ make strange origin more probable all the same. It is of course possible to think of a contamination of non-IE *(ἀ)σπαραγ-/(ἀ)σφαραγ- 'asparagus' and a PIE **spęrħg*-> *σπαραγ- 'sprout, shoot'. However, the *ph* of Sanskrit also remains a difficulty (PIE **sħperħg*-, giving Gr. **ħsperħg*-, Skt. *spħerħg*-?).
- (3) σφαραγέομαι 'to groan with fullness, to be full to be bursting' (οὕθατα ι 440) and 'to burst with noise, crackle, spatter, hiss' (LSJ). This meaning is found in Skt. sphūrjati 'to burst forth, appear; to rumble, roar, thunder'. A root *sperħ2g-/sprħ2g-therefore seems certain. This is conformed to by Lith. spìrgti (*sprħg-) 'hiss (of things fried)', but Lithuanian has other forms in sprógti 'to burst' (*spr-eħ2-g-?) and spragĕti 'to crackle, spatter', which is derived from spragà 'Bresche, Mangel, Zaunlücke, Spalt' and sprāgē 'idem' and (2) 'von einem brennenden Scheit abgesprungener Splitter' (Fraenkel; basic form?). The zero grade is also found in Serb. přžiti 'to roast'. Neither the φ nor the ph of Sanskrit have been explained. The connection with Lat. spargo (which may be *sperħg-) is uncertain. A difficulty is also presented by σπαργάω (E.) 'to be full to bursting, swell, be ripe', which one would not like to separate from the preceding group, but which is difficult to explain by disyllabic root

(cf. Lith. *sprag-*). Perhaps in the case of this emotionally charged, onomatopoeic word allowance must be made for developments that cannot be traced now.

 $\mu\alpha\lambda\alpha\kappa\dot{\alpha}\varsigma$ 'soft' is connected with $\beta\lambda\dot{\alpha}\xi$ 'stolid, stupid', which of course is not semantically imperative (* $m_el\hbar_2k$ -, * $m_l\hbar_2k$ -). OIr. $ml\dot{\alpha}ith$ 'soft, weak' (* $mle\hbar_2$ -ti or * $m_l\hbar_2$ -ti-) suggests a distant connection with the root of 'to grind', Skt. $m_l\dot{\alpha}it$, Lith. $m\dot{\alpha}lti$, $m\dot{\alpha}lti$, $m\dot{\alpha}lti$, (pl.) 'meal', MW blawt, OCorn. blot (* $m_l\hbar_2t\dot{\alpha}$ -) 'meal'. Lith. $m\dot{\alpha}lkis$ 'Dummkopf' may go back to the same * $m_l\hbar$ -k-, but Skt. $m\ddot{\alpha}rkh\dot{\alpha}$ - has been secondarily derived from $m\ddot{\alpha}rchati$ 'to be defeated' (kh analogic? cf. AiGr. II 2, p. 93 and 543 f.).

f. Stems with different Apophonic Forms in Greek

κάρα. One finds in Greek two old apophonic forms of the word for 'head', καρασ- in κάρηνα (cf. Skt. śiras $<*\hat{k}_e r\hbar_2$ -es) and κρᾶσ- in κρᾶατος $<*\kappa$ ρᾶσατος <- η -tos, which replaced *κρᾶνός <-n-όs, corresponding to Skt. śirsnás (beside more recent śirṣatás), from * $\hat{k}_e r\hbar_2$ s- and * $\hat{k}_r \hbar_2$ s- respectively. The full grade * $\hat{k}_e r\hbar_2$ -s- in Lat. cerebrum <*cerasrom, unless this goes back to * $\hat{k}_e r\hbar_2$ -es-ro- (cf. Skt. śiras $<*\hat{k}_e r\hbar_2$ -es-), cf. tenebrae p. 229.

On the other hand, the word for 'horn', Skt. śśńngam, Lat. cornu, Goth. haúrn, W. carn does not seem to have had a laryngeal (*ker-n-). It is therefore the question whether κέρας goes back to * $ker\hbar_2s$ and not to * $ker\eta_-s$ instead. In this way κερα(F)ός (Lat. cervus) could be based on * $ker\eta_\mu$ os, but the connection with Russ. koróva, Serb. kräva (there is no reason to assume * $k\bar{o}r\mu\bar{a}$), Lith. kárvė nevertheless points to * $kor\hbar_2\mu$ o-. (The group κορυφή κόρυμβος, however, displays the clear characteristics of a non-IE substratum word.)

δάμνημι, aor. δαμάσαι, perf. δέδμημαι (II.); derivations δμητήρ h.Pos. 5, δμήτειρα δμῆσις (II.; δάμασις Sch. Pi.), ἄδμητος (II.), ἀδάμαστος (I 158), ἀδμής (δ 637 ζ 109. 228). PIE *demħ2-. The present must originally have sounded like *dm-n-eħ2-mi, OIr. damnaid 'festbinden, (Pferde) bändigen'; δαμ- from dm- before n as in κάμνω τάμνω or analogic, cf. Schwyzer, p. 693 n. 1 with Nachtr. The aorist probably stands for *δεμασαι after the present. In this way (παν-)δαμάτωρ (II.) as against Skt. damitár- (< *demħ-, or *domħ-? PIE *demħ- would have given Skt. *dimi-, see p. 000) for *δεμα-, of which Greek has no trace (Lat. domitor with generalized o). The zero grade in Skt. dāntá- (ἄ-δμητος), dāmyati (ām for ā?). Full grade with o in damáyati (*domħ2eieti; Goth. gatamjan) and arim-dama- (*-domħ2o-) 'den Feind bewältigend'; $i\pi\pi$ ό-δαμος (II.) therefore probably for *-δομος, which perhaps was also replaced to avoid homonymy with -δομος from δέμω 'to build' (e.g. οἰκοδόμος). Thus in Greek one has beside δμη- (*dmeħ2- and *dmħ2-) only δαμ(α)-, but a form with original *demħ2- is not demonstrable.

δέμω 'to build'; (ἐ)δέδμητο (Hom.; νεόδματος Pi.) points to a disyllabic root, as does Skt. $d\acute{a}ma$ -, if from * $dom\hbar_2o$ -. Perhaps δέμας represents * $dem\hbar_2$ -s. See Add.

κεράννυμι (κεραίω I 203, κεράω II.) has an older present κίρνημι (Od.), which perhaps stands for *κάρνημι < * $\hat{k}_{\vec{l}}$ -n- $e\hbar_2$ -mi, aor. κεράσ(σ)αι (II.; ἐπι-κρῆσαι η 164, Hp.), perf. κέκρᾶμαι (Sapph., Pi., Ion.-Att.; κεκέρασμαι Arist.), κρᾶθῆναι (Th.)

κερασθήναι (Pl.). Here, then, we can see a tendency to generalize κερασ-. The starting-point was κίρνημι— ἐκέρασα— κέκρūμαι. Derivatives κρᾶσις (A.) as against (κατα-)κέρασις (Arist.), κρᾶτήρ (Il.) karatera Myc. Skt. (ά-)śīrta- corresponds to (ά-)κρᾶτος (Il.).

 $\pi ε λ άσσαι$, pres. $\pi iλναμαι$ (II.) (for * $\pi αλν$ -?) has the old scheme * p_l -n- $e\hbar_2$ -mi * $pel\hbar_2$ -. The agric $\pi λ ητο$ (II.) will also be old, but with zero grade * $p_l\hbar_2$ -; see p. 95. Zero grade is probably also found in $\pi λ ησίον$, Dor. $\pi λ \bar{α}τίον$; for the formation see Frisk, II, p. 495, where possible Irish cognates of this word are also given.

γελάω has an aorist γελάσ(σ)αι (II.), which suggests $*gel\hbar_2$ -. The present will have been *γέλαμι (J. Schmidt, KZ 39.35; not *γελᾶμι with Specht, KZ 63.211-6, cf. Schwyzer, p. 682,3), which is also suggested by Arg. διεγέλα καταγελάμενος. For γέλας etc. see p. 000. In γαλήνη 'stillness (of the sea)' we have $*γαλασ - < *g_el\hbar_2$ -s-, cf. κάρηνα, if it has been derived from this root (cf. also σελήνη). Equally dubious is γλήνη (II.) 'eyeball' (possibly $*g_l\hbar_2$ -).

θνήσκω τέθνηκα — ἔθανον — θνητός all occur in the*Iliad*. Sanskrit has the aorist*ádhvanīt*(**dhuenħ*₂-);*dhvāntá*- (for the*n*cf.*dānta*- s.v. δάμνημι) conforms to <math>θνητός. For ἔθανον < **e-dhuħ*₂*om* see p. 217. The plural of τέθνηκα, τέθνἄμεν, is analogic, see p. 204. Θάνατος goes back to **dhuenħ*₂-, cf. κάματος s.v. κάμνω (p. 201).

ταράσσω. In Homer the aorist ἐτάραξε and the perfect τετρηχυῖα (H 346), ppf. τετρήχει (B 95) occur, which suggests a root *dhreħ₂gh-. The present ταράσσω (Pi.) is denominative or derived from the aorist. However, the aorist cannot be old, since one would in that case expect ϑ and because full grade is normal here (although *dherħ₂ghs- is not a very probable aorist formation). One must therefore assume influence of a noun, e.g. ταραχή (*dherħ₂gh-), although this does not occur until Herodotus. Θράσσω (Pi., Hp.), ϑ ρᾶξαι (A., E.) may therefore be older and be based on *dhreħ₂gh-. The u-stem τρηχύς will be based on zero grade (*dhṛħ₂gh-(e)u-).

πράσσω belongs to a widespread root *per- (in πέρ $\bar{\alpha}$ (ν), πέρι, πείρω) with the suffix $e\hbar_2$. Of this, Greek has two verbs besides πράσσω, or rather one verb of which a specialized meaning acquired separate forms (Chantraine, Gr. Hom., p. 354 with n. 2). These verbs are:

(1) 'to export for sale' πέρνημι (II.; "περάω wrongly inferred from forms like ἐπέρασσα" LSJ), ἐπέρασσα (II.), πέπρᾶκα (Alex.), πέπρᾶμαι ἐπράθην (A.; πεπερημένος Φ 58, a form which one would more readily expect with (2), but Leskien's

conjecture *πεπρημένος is not permissible); on these latter forms πιπράσκομαι (Lys.) was built, and πιπράσκω (Thphr., see LSJ Suppl. s.v. πέρνημι).

- (2) 'to drive right through, traverse, penetrate, pierce' περάω περήσω ἐπέρησα, all II. (πεπέρακα A.).
- (3) 'to pass through, fare (well etc.), achieve' πρήσσω πρήξω ἔπρηξα (all II.), πέπρᾶγα πέπρᾶχα (Hdt.).

The last form has an invariable stem $*pr(e)\hbar_2g$ - (cf. $\pi\rho\tilde{\alpha}\gamma\mu\alpha$). The present must be based on the aorist (Schwyzer, p. 715), $\pi\epsilon\pi\rho\tilde{\alpha}\chi\alpha$ is an innovation for $\pi\epsilon\pi\rho\tilde{\alpha}\gamma\alpha$. The aorist itself may have been derived from a present $*\pi\rho\tilde{\alpha}$ -γ-ω (cf. $\tau\mu\dot{\eta}\gamma\omega$) (beside which the perfect $\pi\epsilon\pi\rho\tilde{\alpha}\gamma\alpha$ therefore stood).

Πέρνημι is an old present that has the ε of ἐπέρασα, for original *πάρνημι < *pṛ-n-eħ₂-mi (or *πίρνημι?); Aeol. πορνάμεν (Hsch.) arose phonetically from this basic form.

The system of περάω is entirely a Greek innovation.

πλήσσω, πλῆξα ἐπέπληγον, πέπληγα, πληγῆναι all in Homer, πλαγῆναι (Hdt., only in compounds). Derivatives are πληγή, Dor. πλᾶγά. Germanic OE flōcan 'to beat', Goth. faiflokun; OCS plakati se 'to be sad' (Lith. plakù plàkti). Greek therefore has a root *pl(e) $\hbar_2 g$ - (πλήσσω is derived from the aorist).

The full grade I (*pelħ2g-) perhaps in πέλαγος, with an original meaning 'flat', cf. OHG flah and Gr. πλάξ πλᾶκός 'anything flat and broad; plain, ocean-plain, flat top of a hill' (cf. OHG fluoh < *plāki 'roche escarpé'). However, the last Greek form is difficult to explain, since *plħ2k- could not become πλᾶκ- (but only *πλᾶκ-). Cf. Lith. plakù plàkti (Lat. plango). One might envisage here a word of non-IE origin, cf. Πλάκος and OIcel. floer (< *plak-es) 'Felsenabsätze'; cf. Frisk, II, p. 350.

Without the enlargement k/g one has Lith. plóju plóti 'platt drücken, breit formen' — rankas 'die Hände breit zusammenschlagen, in die Hände klatschen'.

An n-derivation is found in Lat. plānus, Celt. Medio-lānum (cf. OIr. lár 'ground, soil'); Lith. plónas 'thin', plónė 'cake'. Πέλανος 'cake' may therefore belong with this. Also compare for the meaning πλακόεις πλακοῦς (Ar.) 'flat cake' (πλάξ supra). However, it must be doubted that παλάθη 'cake of preserved fruit' (Hdt.) and πλάθανον 'kneading board or tray' (LSJ Suppl.) belong here; an enlargement dh is not found elsewhere (from this stem; the words create the impression of being of non-IE origin).

Finally, $\pi\alpha\lambda\dot{\alpha}\mu\eta$ may belong to this root, for which Lat. palma, OIr. lám (cf. lár supra) in any case suggest disyllabic root. More difficult is the relation between $\pi\alpha\lambda\alpha\sigma\tau\dot{\eta}$, Lith. plãštaka and OHG flazza (all 'palm of the hand'). Plãštaka is derived from plàkti (supra) as *plakškata.

ἔτλην does not have any old present in Greek; τλάω appears very late (Tz.), the perfect or τολμάω acts as present. Beside ἔτλην, the aorist also has ἐτάλασσα, the perfect is τέτληκα τέτλαμεν τετληώς (all II.). Cf. p. 244.

The old present is probably found in MIr. $tlenaid < *tlināti < *tl-n-e\hbar_2-ti$ (Lat. tollo < *tl-n-?), which would have given *τάλνημι (*τίλνημι?) in Greek. Έτλην

LARYNGEAL IN THE MIDDLE OF THE WORD

Compared with the position at the beginning or the end of the word, the possible surroundings for the laryngeal in the middle of the word are of course greater. They will all be considered separately in the following chapters.

An explanation, as in the preceding section, is hampered by the sonants which, depending on the further structure of the word, may function either as consonants or as vowels. In one case they display a special development that must be discussed separately. To make the treatment clearer, a survey will be given of the following chapters:

Ch. VI.	VHC
Ch. VII.	VHV
Ch. VIII.	$Hi/\dot{\underline{\iota}}, Hu/\dot{\underline{u}}$
Ch. IX.	CHV
Ch. X.	CHC
Ch. XI.	RH (the disyllabic roots)
	Ch. VII. Ch. VIII. Ch. IX. Ch. X.

Chapter VIII can of course be divided among VI, VII, IX and X, but as these cases occur of one stem, it seemed more desirable to take them quite separately. Chapter XI, too, may be divided among the four chapters mentioned, but here the same applies as for VIII, while moreover in this case $r \nmid m n$ followed by laryngeal display a special development.

At the end in a separate chapter (XII) the material is presented where an interconsonantal laryngeal seems to be lost.

VI. AFTER VOWEL BEFORE CONSONANT

As the vocalic sonants $r \nmid m \mid n$ followed by laryngeal display special developments, they will be discussed in a separate chapter (XI). Here therefore only e, o and i, u plus laryngeal are to be discussed.

One of the fundamental ideas of the laryngeal theory is that the long vowels assumed for the proto-language which are not based on contraction or on lengthening developed from short vowel followed by laryngeal; see the Introduction, p. 8. This process may best be described as follows: when the laryngeal disappeared after short vowel before consonant, the length of the syllable originally closed by the laryngeal was maintained by lengthening of the vowel; before then e had been coloured to e and e by e and e and e and e and e and e and thus became independent phonemes; the timbre of the (ablaut) e was not changed by the laryngeals. One therefore finds:

$$e\hbar_1 > \bar{e}$$
 $e\hbar_2 > \bar{a}$ $e\hbar_3 > \bar{o}$ $o\hbar_1 > \bar{o}$ $o\hbar_2 > \bar{o}$ $o\hbar_3 > \bar{o}^{78}$

The colouring by \hbar_2 and \hbar_3 evidently took place in the proto-language, since the opposition between the three long vowels $(\bar{e}:\bar{a}:\bar{o})$ in different languages (Armenian, Greek, Latin, Albanian, Lithuanian) corresponds exactly.

More difficult is the question when the laryngeal disappeared from this position. It seems to me that the laryngeal was preserved down to the separate languages, for two reasons.

Firstly, the development of vocalic sonant $(r \ l \ m \ n)$ plus laryngeal (Skt. $\bar{i}r$, \bar{a} , Lat. $r\bar{a}$, $n\bar{a}$) is best explained by assuming that in this case the laryngeal was preserved down to the separate languages, an assumption that is also necessary for an explanation of the Greek development ($\rho\eta$, $\rho\bar{\alpha}$, $\rho\omega$ etc.; Chapter XI). True, in the above the vocalic sonant was expressly exempted from this discussion, and it is conceivable that the laryngeal was preserved here for a longer period of time, but this cannot be rendered

⁷⁸ Even when the preceding vowel was already long $(\bar{e}\hbar)$ a long vowel naturally developed. As regards the colouring, $\bar{o}\hbar$ could hardly become anything but \bar{o} , and $\bar{e}\hbar_1$ had to become \bar{e} . In the case of $\bar{e}\hbar_2$ and $\bar{e}\hbar_3$ one could doubt whether \bar{a} and \bar{o} also developed here. The cases will have been few. The only possible case that I know is the basic form of $\dot{\eta}\dot{\omega}\varsigma$, aurora; these point in the first instance to * $\bar{a}us\bar{o}s$, which could go back to * $\bar{e}\hbar_2us\bar{o}s$ or * $\hbar_2\bar{e}us\bar{o}s$, for it is difficult to assume that * $e\hbar_2us$ -would have given * $\bar{a}us$ -.

probable. In PIE r η were vowels like e and i and it cannot be seen why the laryngeal in eHC, iHC should have disappeared before that in rHC.

Secondly, the compositional shortening in Sanskrit indicates that in that language the laryngeal was still present in this position: $s\acute{u}suti$ - 'easy birth' as against $s\acute{u}tave$, which could be interpreted as vocalic shortening, but $carkrt\acute{i}$ -: $k\bar{l}rt\acute{i}$ -, which with vocalic shortening would have given * $carkirt\acute{i}$ -, can be understood only as $-k_r\hbar ti$ -> $-k_rti$ -, so that $s\acute{u}suti$ will also have to be explained in this way (Kuiper, $Die\ Sprache\ 7.14-31$; for further details of this shortening see p. 204 and p. 242 ff.).

This conclusion seems to be confirmed by Hitt. pa-ah-ha-aš-mi [pahhšmi] 'to protect', root * $p\bar{a}$ - <* $pe\hbar_2$ -, with hh from h_2 . If * $pe\hbar_2$ - >* pah_2 - had already become $p\bar{a}$ - in PIE, Hitt. hh would not be explicable. See Hendriksen, Unters., p. 31

Here too it may be asked whether there are indications of a third, o-colouring laryngeal. More important arguments for this can be found elsewhere (see Conclusions, p. 265 f.). Here the following may be remarked.

Just as it has been wondered whether a non-apophonic \check{o} existed, the same may be done for \bar{o} . For it is striking that some widespread roots, such as * $p\bar{o}$ - 'to drink' and * $d\bar{o}$ - 'to give', never display an e-phase (i.e. either \bar{e} ($e\hbar_1$), or \bar{a} ($e\hbar_2$)). This consideration has of course the weakness of every argument e silentio. For it is possible to explain any \bar{o} by $o + \hbar$ (cf. Introduction, p. 4, on Pedersen). Thus for instance * $\hat{g}n\bar{o}$ - in $\gamma\iota\gamma\nu\dot{\omega}\sigma\kappa\omega$ $\gamma\nu\omega\tau\dot{\omega}\varsigma$, Lat. (g) $n\bar{o}sco$ (g) $n\bar{o}tus$, Skt. $j\bar{n}\bar{a}t\dot{a}$ -, OCS znati, where OE $cn\bar{a}wan$ ($cn\bar{e}ow$), OHG $kn\bar{a}u$ point to * $\hat{g}n\bar{e}$ -, so that one must start from $\hat{g}ne\hbar_1$ -/ $\hat{g}no\hbar_1$ -. The zero grade of this root is found in Lith. pa-zintas 'known', Lat. $gn\bar{a}rus < *\hat{g}n\hbar_1$ -ro-(instead of assuming * $\hat{g}n\bar{a}$ - as apophonic form of * $\hat{g}n\bar{e}$ -, like WH s.v.), the full grade I in Lith. $z\acute{e}nklas$ 'sign' $< *\hat{g}en\hbar_1$ -tlo-. The form * $\hat{g}no\hbar_1$ - was therefore probably separated at an early stage from the original whole; hence (g) $n\bar{o}tus$ $j\bar{n}at\acute{a}$ - $<*\hat{g}n\bar{o}$ -to with full grade instead of * $(g)n\bar{a}tus$ * $j\bar{a}t\acute{a}$ - $<*\hat{g}n\hbar_1$ -to-, with the zero grade normal for this form. It must also be admitted that the number of forms with 'non-apophonic' \bar{o} is only small.

One also finds \bar{o} in forms where one would expect e-vocalism. For instance δίδωμι beside τίθημι ἴστ $\bar{\alpha}$ μι. The e-phase is also normal in Lat. $p\bar{o}$ culum, Skt. $p\acute{a}$ tram < * $p\bar{o}$ -tlom/-trom.

A good argument in my opinion is found in Attic reduplication. But the difficulty in practice is that there are few cases with o- ω : ὀμώμοται and ὀρωρέχαται (p. 119). Here the 'prothetic vowel' in ὀρέγω demonstrates a \hbar_3 , and the second syllable displays the lengthening discussed here after the disappearance of the laryngeal, $\omega < e-\hbar_3$, * $\hbar_3 me-\hbar_3 m$ -> ὀμωμ-. However, it is the question whether these forms are old. (The Attic reduplication of monosyllabic roots like ὅπωπα I consider to be analogic; p. 121.)

Whilst for $o\hbar_3$ another result than \bar{o} is not to be expected and $o\hbar_1 > \bar{o}$ is, as far as I know, undisputed (e.g. $9\omega\mu\dot{o}\varsigma$ A., Ar. from * $dhe\hbar_1$ -in $\tau(9\eta\mu\iota)$, the situation with

 oh_2 is different. True, here — as so frequently — indisputable examples are rare, but in my opinion there are sufficient indications to allow of a conclusion. Everything suggests that here too the timbre of the o was not affected, any more than in the group h_{20} , see p. 128. Consequently I do not see on what Kuryłowicz bases his supposition that $o\hbar_2$ became \bar{a} (Apophonie, p. 173 et passim). For it is clear that in this supposition the ablaut \bar{a}/\bar{o} cannot be explained (cf. the parallel problem of \bar{a}/\bar{o} if one assumes $h_{20} > a$, p. 128). He therefore assumes (*ibid.*, p. 186) that here the zero grade $\partial > a$ of \bar{e} , \bar{a} and \bar{o} was the starting-point for new forms with \bar{o} , φημί \rightarrow φŭμέν φἄτός φάσις \rightarrow φωνή. However, this is impossible. In PIE h_1 h_2 h_3 were at first the zero grade of $e\hbar_1$ $e\hbar_2$ $e\hbar_3$ respectively. In Greek, as has been demonstrated above (p. 70 ff.) and as will be shown on p. 182 ff, these became ε α o (which Kuryłowicz rejects). It follows from this that in the zero grade the opposition between the three laryngeals was preserved down to the separate languages and was never lost in Greek. Here, in Greek, a secondary \bar{o} (ω) based on $a < \delta$, as meant by Kuryłowicz, is therefore excluded. The relation ω-α (φωνή-φάσις) does exist, but only as $o\hbar_2 > \omega$: $\hbar_2 > \ddot{\alpha}$. In Kuryłowicz' reasoning one therefore has

PIE $e\hbar_1/o\hbar_1/\partial$ $e\hbar_2/o\hbar_2/\partial$ $e\hbar_3/o\hbar_3/\partial$ — Gr. $\eta/\omega/\check{\alpha}$ $\bar{\alpha}/\bar{\alpha}/\check{\alpha}$ $\omega/\omega/\check{\alpha}$. Here we twice find $\omega/\check{\alpha}$. In my opinion this is incorrect, since \hbar_1 became ϵ and $\hbar_3 > o$, so that — if one adheres to Kuryłowicz' $o\hbar_2 > \bar{\alpha}$ — the result is:

PIE $e\hbar_1/o\hbar_1/\hbar_1$ $e\hbar_2/o\hbar_2/\hbar_2$ $e\hbar_3/o\hbar_3/\hbar_3$ — Gr. $\eta/\omega/\epsilon$ $\bar{\alpha}/\bar{\alpha}/\check{\alpha}$ $\omega/\omega/o$, in which $\omega/\check{\alpha}$ does not occur.

Apart from these considerations, such a series of analogic formations is improbable. (This objection applies to the whole — more recent — view held by Kuryłowicz, who postulates so extensive a system of analogic transformations that these can no longer be accepted; cf. p. 206, 212.)

The following may be mentioned as indications of $o\hbar_2 > \bar{o}$:

With the stem $β\bar{\alpha}$ - of ἔβην belongs βωμός, $*g^uo\hbar_2$ -mos; for the o-vocalism cf. βωμός supra and for instance ὄγμος from $*\hbar_2oĝmos$, p. 128.

Mention was already made above of φωνή from φ $\bar{\alpha}\mu$ ί, *bho \hbar_2 -nā. For the old o-vocalism cf. ποινή, Av. kaēnā, OCS cěna from PIE *kuoi-nā. However, a different analysis was defended by Cuny, Mélanges Boisacq 1 (1937) 227-331: it contains the suffix -onā and *bhe \hbar_2 -ona became *bha(\hbar_2)onā > φωνή. However, this suffix (Schwyzer, p. 490) occurs in the names of implements (ὀθόνη, σφενδόνη, βελόνη, περόνη) and in abstracts (ἡδονή, αὐονή; Skt. svádana- does not contain an element -on-, since this would have given -ān-). Φωνή could belong to the first group, although these seem to be words of non-IE origin (cf. the difference in accent with the second group and with φωνή). However, if one starts from *bhe \hbar_2 -ona, the evidence remains practically the same, for, if it is assumed that \hbar_2 coloured an adjoining o to a, one gets *bha \hbar_2 anā > *φāνā. (As stated above, the problem of the development of \hbar_2 o is in principle the same as that of $o\hbar_2$.) In that case one could postulate a recent formation; as *φā-ovā in Doric would have given *φāνā (Lejeune, Traité, p. 235), only *φά-ovā could then still be considered. Consequently, of greater importance here than φωνή

is φωνέω, which is not derived from φωνή (cf. Schwyzer, p. 720 n. 10). It will be a denominative, but then derived from a stem φωνε/o-, which was lost in later Greek; this points to great age for the stem φων-, and makes it improbable that it contains an element -on- (-one/o- beside -onā is very rare: only the in my opinion dubious cases θρόνος κλόνος χρόνος, Schwyzer, p. 490,5). (*Bhoħ₂-nā is now also given by Chantraine, Morph.², p. 6.)

The word for 'ear', which in part has o-vocalism ($o\delta\varsigma$, $\delta\varsigma$) and in part a-vocalism (Lat. auris), seems to me to be a clear case. If the interchange ou/au is not automatically accepted for the proto-language one has to start from basic forms like * $o\hbar_2us$ -(nom.), $e\hbar_2us$ - (or * \hbar_2ous -, \hbar_2eus -; perhaps with long o; for e/o in a neutral word cf. γ óvv: Lat., Hitt. genu) and assume that the \hbar_2 did not change the timbre of the o. Ruijgh, who does not do the latter, is obliged to consider the existence of two different roots, * \hbar_2eu - and * \hbar_3eu - (Etudes, p. 58 n. 54).

Άκωκή may also contain $o\hbar_2$; see p. 125 f.

Another case in which one cannot accept Kuryłowicz' explanation by means of analogy is the root * $p\bar{a}$ -/ $p\bar{o}$ - 'to protect': Lat. $p\bar{a}sco$ $p\bar{a}stor$ $p\bar{a}bulum$, Hitt. pa-ab-ba- $a\bar{s}$ -mi [$pabh\bar{s}mi$], Goth. fodjan — π ων ποιμήν (cf. π ατέομαι, Frisk s.v.).

Other forms cited from Greek are θήγω (θάγω) — τέθωκται τεθύμωται and τεθωγμένοι beside τεθαγμένοι. (If these forms are old, the ω must have been introduced from elsewhere, since in the middle one expects zero grade.) Cf. Frisk s.v. *9ώσσω.

The analysis of the ending 1 sg. pres. of the thematic verbs $-\bar{o}$ as $-o-\hbar_2$, with \hbar_2 identical with that in 1 sg. perf. $-a < -\hbar_2 - e$ and 1 sg. midd. $-ai < -\hbar_2 ei$ also fits into this picture; see p. 133. See Add.

To demonstrate laryngeal after vowel by means of Greek material on other grounds than the compensatory lengthening discussed here is possible in only a few cases, if we leave the type $*dhe\hbar_1$ - $/dh\hbar_1$ - out of consideration. For Indian the explanation of the (t)h in ti-sth-ati by the laryngeal from the root $*ste\hbar_2$ - in *sti-sth-eti may be recalled here.

In the present reduplication one finds lengthening of the *i*, Skt. *iyarti*: *frte* from * $\hbar_3 i$ - $\hbar_3 erti$: * $\hbar_3 i$ - $\hbar_3 rtoi$, 79 *ájati*: *fjati*. An example of this is found in Greek in $i \dot{\alpha} \pi \tau \omega$: * $i \pi \tau \sigma \mu \alpha \iota$. More of a problem is formed by $i \chi \alpha \nu \dot{\alpha} \omega$ (Hom.), Skt. *fhate* 'to crave, yearn'; the cognate $i \alpha \chi \dot{\gamma} \nu$ (Theocr., $i \alpha \chi \dot{\gamma} \nu \dot{\alpha} \nu$) 'poor', Av. *āzi* 'craving' will go back to * $i \hbar e \hbar_2 g h$ - and therefore *fhate* will go back to * $i \hbar e \hbar_2 g h$ -. See p. 129.

The stem $dot{o}πiπ$ - seems to go back to *opi- $\hbar_3 k^u$ -, ἐνiπή to *eni- $\hbar_2 k^u$ - (p. 129).

The lengthening in Attic reduplication was already mentioned above (*ἐληλουθ- < * $\hbar_1 le-\hbar_1 loudh$ -).

A category that was not yet discussed earlier is the augment in words that have 'prothetic vowel', such as $\eta \epsilon i \delta \epsilon \eta \epsilon me$ from e-HC-. The fact that a PIE basic form

⁷⁹ This form would perhaps have given *hihṛtoi > *iyṛte. In that case the i will stem from the 3 pl., *hihṛṇtoi > irate (for the structure cf. *dhuṇhtós > ivṛtos, not *dhunḥtós).

is concerned here is demonstrated by Sanskrit, e.g. $\bar{a}nat$, from the root nas-, from *e- $\hbar_1 ne\hat{k}$ -t.

From the stem * $bh\bar{u}$ - one finds du. ĕ $\phi\bar{v}$ τον, Skt. $\dot{a}bh\bar{u}tam$, where the laryngeal is evident from the disyllabic root in Skt. $bh\dot{a}vitum$, *bheuh-/bhuh-.

In this way disyllabic root is demonstrated for $9\bar{\nu}$ by Skt. *do-dhavī-ti*, *dhavítram*. See p. 186. Hitt. *tuḥḥuwai*- 'smoke' etc. probably belongs with this (Friedrich, *Erg.h.*, p. 2 s.v.).

Πῖαρ, πίειρα, Skt. $p\acute{t}var\bar{\imath}$ seems to go back to * $pi\hbar$ -u-er-, of which the full grade *pei- \hbar - is perhaps found in Skt. $p\acute{a}yate$ 'to be blown up', and the stem II *pi- $e\hbar$ - in $py\acute{a}yate$. The zero grade $pipy\acute{u}s\bar{\imath} < *pi$ - $pi\hbar$ -us- $i\hbar_2$ would have had to have lost the laryngeal in compounds.

In the latter cases one is therefore concerned with the zero grade of disyllabic roots with i, u as second consonant; those with r l m n (zero CRHC) are discussed in Chapter XI.

An example from declension is the genitive of the $J\alpha$ -stems. This is the type δρόγυια *ὀργυιάς (p. 37), Skt. devi devyāh, of which the ending must have been nom. $-i-\hbar_2$, gen. $-i-\hbar_2-s$.⁸⁰

Another case of lengthening is the nominative of the type $\gamma\lambda\omega\chi$ ic, of which the ending -ic will go back to - $i\hbar_2$ -s.

Reference should also be made here to all stem II forms of the disyllabic roots (*TReH*), for which I refer to Chapter XI.

Finally, attention should be drawn to the fact that the development of $-e/o\hbar$ at the end of the word to long vowel is based on the principle discussed here; see for this p. 145 f.

⁸⁰ The genitive here must therefore originally have had an acute accent, -άς, unlike the circumflex of the \bar{a} -stems, see p. 170; usually one reconstructs a circumflex here, e.g. Pedersen, *Cinq. décl.*, p. 30.

VII. BETWEEN VOWELS

Intervocalically the laryngeal was lost, as everywhere else. Indo-Iranian forms in which the hiatus has been preserved demonstrate that this did not happen until the separate languages; see the Introduction, p. 9f.

As regards the colouring by the laryngeals, the same rules apply as stated in the previous chapter. Cf. $\delta \alpha \tau - \langle *de\hbar_2 i - t -, p. 175, \pi \circ \iota \mu \dot{\eta} v \langle *po\hbar_2 i m \dot{e}n, p. 168.$

The most frequent and clearest cases of intervocalic laryngeal are those where the laryngeal stands before i or u, which are dealt with separately in the following chapter.

It may also be asked here what happened to the group $-e\hbar_{2,3}e$. It has been demonstrated above that the laryngeal colours both preceding and following e. It is therefore plausible that here both were coloured, but it is equally possible that the colouring was confined to the tautosyllabic, i.e. following e. A case where this situation occurs is the declension of the \bar{a} -stems. The development of the genitive here may be imagined as follows:

(a)
$$-\dot{e}\hbar_2 - es > -\dot{a}\hbar_2 as > -\dot{a}as > -\tilde{a}s$$

But allowance must also be made for the following possibilities:

(b)
$$-\dot{e}\hbar_2 - es > -\dot{a}\hbar_2 es > -\dot{a}es > -\tilde{a}s$$

(c)
$$-\dot{e}\hbar_2$$
- $es > -\dot{e}\hbar_2$ as $> -\dot{e}$ as $> -\tilde{a}$ s

However, it should be borne in mind that, as the laryngeal was preserved intervocalically until after the division of the proto-language, the development from the second to the third phase (in each of the lines of development stated) took place in the separate languages. Now, since in all cases the result of the contraction is the same $(-\tilde{a}s)$, it is more probable that $-a\hbar_2as$ was the starting-point, since ae or ea did not necessarily become \bar{a} everywhere. (This may be doubted for Greek, for instance; cf. Lejeune, $Trait\acute{e}$, pp. 233-6, although these contractions are probably more recent.)

The question of the so-called temporal augment should also be raised here. In the case of verbs that began with a, this goes back to $\hbar_2 e$ - (p. 133 ff.), so that the augment form here (for instance) was $*\acute{e}-\hbar_2 e\^g$ -om. On the strength of the consideration stated above, one may therefore assume PIE $*\acute{a}\hbar_2 a\^g$ om > Gr. $\acute{a}ag$ on > $\~ag$ yov. In present stem forms and aorists o- will be mostly based on $\hbar_3 e$ -, so that for instance $\~ag$ upoag000, Skt. $\~am\~it$ 1, PIE $*\acute{e}-\hbar_3 em\hbar_3$ - > $*o\hbar_3 om\hbar_3$ - may be reconstructed. (Verbs with $\hbar_1 e$ - or e-present no problems, since something other than $\~e$ - $<\acute{e}(\hbar_1)e$ - is not imaginable.) In Indian one would expect traces of $\~a\~e$ -, which are not frequent, however.

Where *i*- is present reduplication, this probably developed from $\hbar i$ - \hbar -, e.g. $\hbar \omega < \hbar_2 i$ - $\hbar_2 e u$ -. There is no trace of the forms $\star \acute{e}$ - $\hbar_2 i$ - $\hbar_2 e u$ -> $\star a\hbar_2 i\hbar_2 a u$ -> (Gr.) $\star a_i a u$ -(with \hbar_1 and \hbar_3 e i and e i-) to be expected. Greek has $\bar{\iota}$ - here, as in forms with ι - of a different origin as well as $\bar{\upsilon}$ - from υ -, $\hbar \acute{a} \iota \upsilon \upsilon$ - (**is*-?), $\bar{\upsilon} \iota \upsilon$ - $\bar{\upsilon} \iota \upsilon$ - This $\bar{\iota}$ $\bar{\upsilon}$ must therefore have arisen on the analogy of the above-mentioned forms with long vowel from contraction (Schwyzer, p. 654f.). Here Indian has ai au (ai-cchat from ai-cchat ai-ai-cchat from ai-chat ai-chant from ai-chat ai-chant from
A rather complicated case is the genitive of $\pi\lambda\eta\vartheta\dot{\eta}\varsigma$. On the strength of the comparison with Lat. $pl\bar{e}b\bar{e}s$ (Pedersen, Cinq. décl., p. 62 f.), the original paradigm may be reconstructed as follows (Kuiper, Notes, p. 12-9):

sg. nom.	*pleħ1dh-ᡎ-ḗħ1-s
acc.	$ u$ - $\epsilon\hbar_1$ - m
gen.	u - \hbar_1 - $\acute{o}s$
pl. loc.	u - \hbar_1 - $s\acute{u}$
instr.	u-ħ ₁ -bhís.

In the genitive the laryngeal therefore fell intervocalically. In the nominative the weak stem before consonant, $-u-\bar{h}_1-C > -\bar{v}C$, was introduced in Greek; in Latin the full grade stem, $-\psi-e\bar{h}_1-C > -(\psi)\bar{e}C$, was generalized.

Another example from declension is the genitive of $d\phi p \psi \zeta$, of which the declension was * $\hbar_3 bhr \acute{e}u\hbar s$ * $\hbar_3 bhr \acute{e}u\hbar m$ * $\hbar_3 bhr u\hbar \acute{s}$ * $\hbar_3 bhr u\hbar \acute{s}$ (Kuiper, Notes, p. 9).

Cowgill (p. 147) states as example πλεῖστος $<*ple\hbar_1$ -istos. However, in that case this would have the full grade from the comparative, instead of the expected zero, $*pl\hbar_1$ -istos, which would have given $*\pi\epsilon\lambda\iota\sigma\tau\circ\varsigma$. See p. 174.

It is not clear whether λ ύω originally had a laryngeal: βουλῦτός, Lat. solūtus (Skt. lunāti, 'to cut off, destroy', lavitra-?). The short vowel in present and imperfect may have developed antevocalically, but the forms ἐλύμην λύτο seem old. Although the term appears old, the υ may be long in βουλυτόνδε (Π 779 = ι 58) for the sake of the metre.

Cowgill is of the opinion that the adjectives ending in $-\alpha \tilde{1} \circ \zeta$ from substantives ending in $-\tilde{a}$ may be explained as $-e\hbar_2-i\dot{\mu}o->-ai\dot{\mu}o-$. But after $e\hbar_2$ one would expect $\dot{\mu}o$ (and not $i\dot{\mu}o$). It is also the question whether the origin of this form must be sought in PIE. I do not see that the laryngeal theory offers new possibilities here. (For the problem see Schwyzer, p. 467, Lejeune, $Trait\acute{e}$, p. 145 f., Buck-Petersen, $Reverse\ Index$, p. 44 f., with lit.).81

There are two further special groups that belong to this category, viz. those with vocalic sonant $r \nmid m n$ before or after the laryngeal.

A case of VHR could be the imperfect of opvout, * \acute{e} - $\hbar_3 r$ -n-u-to. However, here no

⁸¹ Ruijgh, *Etudes*, p. 212, assumes $-e\hbar_2\dot{i}o->-ayyo->-\alpha io-$, but does not explain the development $-e\hbar_2\dot{i}o->-ayyo-$ for the expected $-\bar{a}\dot{i}o-$.

conclusion may be drawn from $\delta \rho \nu \nu \tau \sigma$ with regard to the phonetic development, for this augment form may have been taken over from the aorist (*e- $\hbar_3 e r$ -). In my opinion one might expect $e\hbar_3 r > o\hbar_3 r > Gr$. $o\hbar_3 o r > oor > \bar{o} r$, $\omega \rho$. I do not know another case with this sequence. In Indian one has * $\hbar_3 i$ - $\hbar_3 r toi > i r t e$, where one could also expect * $\hbar_3 i$ - $\hbar_3 r$ -toi > i r t e; however, here too an explanation by analogy is possible (see p. 168).

If the preceding vowel was $r \nmid m n$, a special development took place, which will be discussed under the disyllabic roots in Chapter XI.

VIII. BEFORE i/i, u/u

If a laryngeal was followed by i or u, it depended on the further structure of the word whether that i, u functioned as a vowel or as a consonant. The same may occur in principle with r l m n, but I know no cases of this except those mentioned at the end of chapter VII, while i and u often occurred as enlargement of roots, also of roots ending in laryngeal.

This possibility of two different developments has been mentioned by Kurylowicz, Etudes, p. 36 ff., e.g. Skt. stāyú-: stená- from PIE *steħ2iu-: *steħ2i-no-.

The clearest case is presented by the root * $p\bar{a}$ -/ $p\bar{o}$ - 'to protect', * $pe\hbar_2$ -/ $po\hbar_2$ -, from which one has π οιμήν < * $po\hbar_2i$ - $m\acute{e}n$ as against Skt. $p\bar{a}y\acute{u}$ - 'guard, protector', π õ \ddot{u} < * $po\hbar_2i$ -u. The non-enlarged root is found in Hitt. pa-ah-ha-aš-zi [pahhšzi] 'to protect' and Lat. $p\bar{a}sco$ $p\bar{a}stor$ $p\bar{a}bulum$. True, Gr. π οιμήν could also have developed from * π ωιμήν, but the \bar{o} (ω) could only be explained by the improbable structure * $po\hbar_2i$ mển.

If $\bar{a}i$ in Skt. $st\bar{a}y\dot{u}$ - $p\bar{a}y\dot{u}$ - is to be regarded as a long diphthong, 82 this should be strictly differentiated from the two other forms of long diphthong (as does Kuryłowicz, Etudes, p. 40), viz. that from lengthening and that from contraction. An example of the latter is the dative singular of the o-stems ending probably in $-o-ei > -\bar{o}i$. A lengthened diphthong may be seen for instance in the nominative singular * $Di\dot{e}us$. One therefore has long diphthong:

- (1) from contraction e.g. dat. sg. o-st., -o- $ei > -<math>\bar{o}i$;
- (2) by lengthening e.g. nom. sg. $*Di\acute{e}us$; sigm. aor. $*\acute{e}-l\~{e}ik^u$ -s- η > Skt. $\acute{a}r\~{a}ik$ \$sam;
- (3) through laryngeal e.g. $e\hbar_2 i V >$ (in sep. languages) $\bar{a}i V$.

It is in this light that the rule that long diphthong before consonant, i.e. phonetically, loses its diphthongal element in PIE and becomes a long vowel must be seen. The last group of 'long diphthongs', which were the result of laryngeal, therefore do not occur before consonant as such, for they become — phonetically — short diphthongs $(\pi \circ \iota \mu \dot{\eta} \nu)$. And yet the rule is based for a part on these roots, owing to the fact that the enlarged roots before vowel $(e\hbar_2 i - V > \bar{a} i V)$ were compared with the non-enlarged roots before consonant $(-e\hbar_2 C > -\bar{a}C)$. Strangely enough, this again is not found sharply enough in Kuryłowicz, *Apophonie*, p. 257, where he states that it is 'plutôt

⁸² The definition of diphthong is not very clear-cut. See for the whole problem Meillet, *Introd.*⁸, pp. 105-25, in particular p. 110.

probable' that π ωμα is the full grade without *i*-enlargement. For Gr. π ωμα cannot come from * $p\bar{o}i$ -, * $pe\hbar_3i$ -, since this would have become * π οιμα. PIE loss of the *i* in * $pe\hbar_3$ -i-m- is refuted by the type π οιμήν.

That the second category of long diphthongs was preserved down to the separate languages is demonstrated by the examples given, Skt. *Dyáuḥ* (Ζεύς shortened from *Ζηυς in accordance with Osthoff's Law, Lejeune, *Traité*, pp. 188 f.). The accusative of this same word, Skt. *Dyám*, Lat. *diem*, Zῆν (see p. 150)⁸³ suggests PIE **Diēm*, which will have arisen from **Diéum* (with dissimilation in -*ēum*); **Diéum* itself stands, after the nominative, for the **Diéum* that would be expected.⁸⁴

The first group usually retains the diphthongal element too. The rule therefore has no general validity, but relates only to a few special cases.

The following forms are known of these roots (with for instance \hbar_2):

$$(e\hbar_2 > \bar{a}C \quad \check{a}V \quad \hbar_2 \quad C - C := \vartheta \quad C - V : \text{zero})$$

 $e\hbar_2 i > \bar{a}iV \quad \check{a}iC \quad \hbar_2 i \quad C - C : \bar{1} \quad C - V : \underline{i}$

Reference has already been made (p. 170) to the cognates of $\delta\alpha$ io $\mu\alpha$: Skt. $d\bar{a}ti$ -, diti- $<*d\hbar ti$ -, $dy\acute{a}ti$ $<*d\hbar$ -io- or $*d\hbar i$ -o-; for $\delta\alpha$ io $\mu\alpha$ itself see below. It is the question whether $*d\bar{i}$ - in Arm. ti, ON time 'hour, time' belongs here; this might be based on $*d\hbar i$ -C > $di\hbar$ -C, see below.

Πλέων πλέον is based on *pleħ₁-is-on (like πλεῖστος < *pleħ₁-is-to-, of which the ει stems from πλείων πλεῖον, see p. 171). Cf. Skt. prāyas- < *pleħ₁ios-, and déṣṭha-with disyllabic e from *deħ₃is-; cf. the Introduction, p. 10. In Hom. πλεῖος (for πλῆςς), Att. πλέως, Arm. li, Skt. prāyaḥ 'mostly' we have *pleħ₁-io-. The stem is that of *pelħ₁-/pleħ₁- 'to fill' (πλῆτο, πληθύς, Lat. plēbēs, plētus etc.).

Beside θῶσθαι etc. (Frisk; formation unclear) θοίνη may go back to *dheħ3i-.

A separate problem is formed by the zero grade of these roots with *i*-enlargement, where one finds $\bar{\imath}$. As one would expect that in $C\hbar iC$ the laryngeal would disappear without lengthening (see the following section), metathesis of \hbar and i has been assumed here, as by Hammerich, $Lar.\ b.\ Son.$, p. 35. This solution is a dangerous one: the explanation given by Hammerich of Skt. $p\bar{u}rn\dot{a}$ - (from * $p\bar{h}rna$ - < * $p_r\bar{h}na$ - < * $p_l\bar{h}no$ -) and $\dot{a}s_rk$, $y\dot{a}k_rt$ (p. 37 ff.) already takes this principle too far. Even less happy seems to me the idea of Frei (Cahiers Ferd. de Saussure 16 (1958-9) 9 n. 35) that (for instance) * $p\bar{i}$ - (from * $p\bar{o}$ -, * $pe\bar{h}_3$ - 'to drink') does not go back to * $p\bar{h}_i$ - but to the non-enlarged root * $p\bar{h}_3$ -, after which an 'i de liaison' appeared between the laryngeal and following consonant (* $p\bar{h}_3$ -i-C), which with metathesis gave * $pi\bar{h}_3$ - > * $p\bar{i}$ -. Apart from the fact that one would also expect such an i elsewhere, one would in that case have to explain the \bar{u} as zero grade of $\bar{e}u$, $e\bar{h}u$ by an 'u de liaison'. Here too metathesis is assumed.

This metathesis is not immediately convincing. It is not clear why before e/o the ⁸³ The original accent of *Diéum will, as in the nominative *Diéus, have been an acute one. The circumflex in Greek is a result of the addition of the - α : *Z $\dot{\eta}\nu$ > Z $\ddot{\eta}\nu\alpha$.

⁸⁴ Cf. the discussion in Kuiper, *Notes*, pp. 38 f. and 68-70.

laryngeal would fall, but before i (and u) metathesis would occur. The difference in articulation could therefore be the sole cause of this, but one would like to find indications of such a phenomenon elsewhere. It can only be stated that the lengthening (in the \bar{i}) and the fact that \bar{i} does not seem to occur before vowel point to a group -iħ-C. For the moment another solution is not known. It cannot be denied that there is a difficulty here, but I do not see that the old solution (Schulze's $\partial i > \bar{i}$) is better, as for instance Leumann (Mus. Helv. 14 (1957) 75 = Kl. Schr., p. 260 n. 2) suggests. For, according to the old shwa theory, ∂ would in all situations have become a, also in ai before vowel (even in Indian, where a normally became i; see below). There is no reason why ∂ in ∂i before consonant would have become i. Here too an auxiliary hypothesis is therefore necessary, which finds no support elsewhere. (Moreover, the idea would fit straightaway into the laryngeal theory: ChiC > CiiC > CiC.) However, the essential thing is that the laryngeal theory has pointed to the predominantly consonantal character of the a; it is therefore improbable that the laryngeal, which even interconsonantally did not always become a vowel, was vocalic in these surroundings (ChiC).

A clear case is the root * $dh\bar{e}$ - 'to suck, give suck', * $dheh_1$ -(i-); * $dheh_1$ -C: Gr. θῆλυς θηλή, Skt. dhārú-, Lat. fēlare (fīlius), Lith. dėlė̃ 'bloodsucker' etc.; *dheħ₁-i-C: Skt. dhenú-'milking', dhenā 'milch cow'; *dhī-: Skt. dhītá-, Latv. dīle 'sucking calf'. Apart from the last one the following forms also present problems here: *dhi- OHG tila 'woman's breast', MIr. del 'nipple'. This could continue * $dh\bar{h}_1$ -i->* $dh\bar{t}$ -, but that would be in contradiction of the explanation given above of *dhī-. Finally there is *dhăi- (?) in Skt. dháyati, OCS doję, Goth. daddjan. The δαίομαι mentioned above belongs to the same category. The form *dai- of this can be explained in two ways: as * $de\hbar_2i$ - (but in that case only before consonant, from which it could then have spread further) and as * $d\hbar_2 ei$ - (Kuryłowicz, Etudes, p. 65). A form * $d\hbar ai$ - of * $dhe\hbar_1$ -, however, cannot be explained in that way, but dojo daddjan may go back to *dhħ1oi-je-; the vocalism of dháyati is unknown (so that *dhħ1ei- is possible). Such problems must be considered morphologically from case to case. The old explanation *dhai->*dhăi-(in terms of the laryngeal theory *dhħi-) should be rejected, since in this position the laryngeal was probably not vocalic. This emerges from forms such as Skt. dyáti 'to share', syáti 'to tie', from * dh_1 -je-, *sh-je-, Kuryłowicz, op. cit., p. 64; cf. for the latter form Hitt. ishianzi (p. 86).85 Moreover, this would also presuppose \hbar (a) > a for Indian, which does not have much support.

The long i is also found in the root of oipóv 'ploughed furrow' (*seħ3ir-): Skt. stra- 'plough', sttā 'furrow' (*sħ3i->*siħ3-?).

The best-known case is the root * $p\bar{o}$ -(i-) 'to drink', * $pe\hbar_3$ -(i-). This form occurs only in Skt. $p\bar{a}y$ - $\dot{a}yati$ ('to cause to drink'). In addition one finds the non-enlarged root * $pe\hbar_3$ -, $\pi \omega \omega$, Lith. puota 'drinking-bout', Lat. $p\bar{o}tus$, $p\bar{o}culum$, Skt. $p\dot{a}tram$ $p\bar{a}t\dot{a}r$ -. As the zero grade we find * $p\bar{i}$ -, Skt. $p\bar{i}t\dot{a}$ - $p\bar{i}t\dot{i}$ -, OCS piti. The Greek forms have been

⁸⁵ Thus for Av. xvāng 'of the sun', having regard to ἠέλιος < *seħ2 ψ -el-, I would be more inclined to assume *sħ ψ -ens than *suħ-ens, as Kuiper does, Notes, p. 34, n. 2.

interpreted by Leumann (loc. cit.). Comparing the ablaut δω-/δο- from δίδωμι, he starts from an interchange * $p\bar{o}$ -/ $p\bar{i}$ -, e.g. in the athematic agrist *e- $p\bar{o}$ -m (Skt. $ap\bar{a}m$): *e- $p\bar{i}$ -mes. It is assumed that these two stems can still be seen in Aeolic $\pi\tilde{\omega}\vartheta_i:\pi\tilde{\iota}\vartheta_i$. The thematic agrist ἔπιον is said to have had its starting-point in 3 pl. *e-pī-ent> *έπιεν. However, the reconstruction of this agrist seems to me to be based on too weak grounds. After all, parallel to $\delta\omega$ -/ $\delta\sigma$ - one cannot expect anything but (Gr.) $\pi\omega$ - $/\pi\sigma$ - (* $pe\hbar_3$ - $/p\hbar_3$ -; or, as * $p\bar{o}$ - $/p\bar{o}$ -, possibly $\pi\omega$ - $/\pi\bar{\alpha}$ -). The interchange * $p\bar{o}$ - $/p\bar{i}$ - can only be explained by an original system * $p\bar{o}i$ -($p\check{o}i$ -)/ $p\bar{i}$ -, but there is no indication of * $p\bar{o}i$ - in the agrist. Thus, if $\pi\tilde{\omega}\vartheta\iota/\pi\tilde{\iota}\vartheta\iota$ does indicate such an agrist, the latter must itself already be secondary. The same problem occurs in the present forms. Parallel to δίδωμι, Leumann assumes *pipōmi *pipīmes, of which he asserts that Skt. pibati is the thematic transformation. However, this transformation usually proceeds from the 3 pl., which in this view would therefore have been *pi-poj-enti, which in all languages would have become *pipaienti (possibly *pi-pai-nti > *pipaiati). It is clear that one must start from the root without i: *pi- $pe\hbar_3$ -mi *pi- $p\hbar_3$ -mes 3 pl. *pi- $p\hbar_3$ -ntipibati. In this way the $b < ph_3$ is also explained. The correctness of this explanation is rendered probable by the Vedic forms:

	act.	midd.
3 sg.	pāti (<*pipāti?)	pipīte
3 pl.	pibati	pibate/pipate

The 3 sg. midd. must have been *pi- $p\hbar_3$ - $toi > *pip\bar{t}te$; the long i is based on Indian lengthening, as in $pun\bar{t}te$. Here, therefore, the p did not become voiced, since \hbar_3 here did not stand before vowel but itself became vocalic.

The Sanskrit present forms thus point to * $pe\hbar_3$ - $/p\hbar_3$ -, from which the transition to the thematic declension also becomes demonstrable. However, forms like $p\bar{\imath}t\dot{a}$ -, $\pi\bar{\imath}\vartheta\imath$ must ultimately go back to * $p\hbar_3i$ -.

As stated, the original zero grade in *pō-, *peħ3- must have been *pħ3- i.e. in the European languages *pǎ-. There is no trace of this (for OCS pojǫ 'to cause to drink' cf. dojǫ supra). One therefore hesitates to take Gr. π o- for *pħ3- (e.g. Leuman, loc. cit.). And yet it would be easy to understand that an original European *pǎ-(<*pħ3-, *pō-) was replaced by *pō- (or *pī-), and Indian *pu- (<*pħ3-) by *pī-(<*pħ3-<*pħ3i-), and that *peħ3-/pħ3- was preserved only in Greek, where π ω-/ π o-(like δω-/δο-) conformed to the same ablaut scheme as \bar{a}/\bar{a} , η/ϵ . The forms with π 0 admit very well of this interpretation: π οτόν 'that which one drinks, drink' (π οτός 'drunk, for drinking', A., E.), π όσις 'drinking', π οτής 'drink' II.; more recent π ότος 'carousal' Cratin., X., π ότιμος Hdt., Hp., π οτήριον inscr. ?700, Alc., Sapph., π ότηρ 'drinking cup' E., π ότις (π ότης) 'drinker' Phryn. (Ar.); π όμα Pi. N. 3.79, Hdt., Hp. for π õμα A., S., E. For the oldest stage π ῖνον 'liquor' Arist. and π ίστρα 'drinking trough' E. are not of importance in my opinion. These data indicate that π οτός (π οτόν) was the starting-point of a number of derivations and that π οτός and π όσις were the oldest forms of this group (still including οἰνοποτάζω II.); π 0- became

characteristic of the nominal forms and even $\pi \tilde{\omega} \mu \alpha$, the only Greek word with $\pi \omega$ as against Skt. $p\tilde{a}t\acute{a}r$ - $p\acute{a}tram$ $p\tilde{a}nam$, was replaced by $\pi \acute{o}\mu \alpha$. In these two forms zero
grade is normal and if $\pi \sigma \tau \acute{o}\varsigma$ ($\pi \acute{o}\sigma \iota \varsigma$) is compared with $p\bar{\iota}t\acute{a}$ - ($p\bar{\iota}t\acute{\iota}$ -), Lat. $p\bar{\sigma}tus$, Lith. $puot\grave{a}$, it seems probable that $\pi \sigma \tau \acute{o}\varsigma$ continues an original * $p\hbar_3t\acute{o}$ -, which was replaced
elsewhere by $\bar{\iota}$ (for $\check{\iota}$, or u) and \bar{o} (for \check{a}) respectively. There is little to be said about
the age of forms like $\mathring{e}\pi\acute{o}\vartheta \eta \nu$ A., $\pi \epsilon \pi \acute{o}\sigma\vartheta \alpha \iota$ Thgn. (and $\pi \acute{e}\pi \omega \kappa \alpha$ A.). They could have
been built on $\pi \sigma \tau \acute{o}\varsigma$. In this form $\pi \acute{e}\pi \omega \kappa \alpha$ is a Greek creation, having regard to the κ .

Πίθι Cratin. is in any case older than Aeol. π ῶθι, since here zero grade is normal. However, there is no certainty about the age of the long i (Sanskrit has $p\bar{a}hi$). The question is therefore in which forms * $p\bar{i}$ - was original. It should also be pointed out that the 3 pl. of an athematic aorist would have been *e- $p\hbar_8$ -ent (>* ϵ πεν with analogic ϵ for * ϵ πον), a form that was not very clear and could easily be replaced.

An isolated case of laryngeal before u is $\beta o \delta \zeta < *g^u o \hbar u s$ (* $g^u \acute{e} \hbar_3 u s$?); see Kuiper, Notes, pp. 32 ff.

Perhaps yovat-, Arm. kanai-k', has ai from $e\hbar_2$ -i.

We should also discuss here the words with αv , αt , Schwyzer, p. 347b. On the one hand borrowing is possible here ($\tau \alpha \tilde{v} \rho o \varsigma$, p. 134), on the other hand, however, $-e\hbar_2 - u$ -or $-\hbar_2 e u$ - may have been the origin.

In the first place there is the interchange with $\omega(\upsilon)$ in τραῦμα A.: τρῶ(υ)μα Hdt., Hp. and θαῦμα II.: θῶμα Hdt. Θαῦμα has no cognates outside Greek. The supposition that θαῦμα/θῶ(υ)μα goes back to two different basic forms (*dhəu-/dhōu-, Frisk s.v.) does not inspire confidence. If the connection with θάμβος is correct, one finds the following stem forms side by side: θαφ-? (τάφος ταφεῖν): θαβ- (with prenasalization in θάμβος): θαπ-? (τέθηπα): θᾶϝ-/θω(ϝ)- (θῆβος = θηϝος?, *θᾶϝᾶ see Frisk s.v. θεά, θαῦμα, θῶ(υ)μα). This points to a non-IE word; see Kuiper, Μνήμης χάριν, I, p. 225.

Recently Frei (Cahiers De Saussure, 16 (1958-9), 1-22, 17 (1960) 47-53 and 19 (1962), 87-91) has repeated the attempt to connect * $p\bar{o}$ - with * $\bar{a}p$ - 'water' on the strength of a reconstruction of a meaning 'to flow' for * $p\bar{o}$ -. He now posits a root * \hbar_2ep - 'couler' > 'courant d'eau, riviére, eau' and connects this with * $p\bar{o}$ -, * $pe\hbar_3$ - as * $\hbar_2ep-\hbar_3$ -/ $\hbar_2p-e\hbar_3$ -. This seems to me impossible, since the second form in Greek would have been * $\dot{a}\pi\omega$ -. Skt. $p\dot{a}yate$ is also taken here as * \hbar_2pei -, though semantically speaking it should preferably be left as * $pei\hbar$ - connected with $\pi\bar{a}ap$ etc., see p. 169. The connection with ab-in European names of rivers (* $A\beta\alpha$) π 0 or π 0 or π 1. Abonā, OIr. abann 'river) as * $\hbar_2ep\hbar_3$ - (with $p\hbar_3$ > b) with Skt. $\bar{a}pi$ 'water' is an unfortunate one, since in that very case Sanskrit does not have a b (for the European names of rivers see p. 135). Finally, as Frei remarks, one would expect not pibati but *fibati (* \hbar_2i - $\hbar_2p\hbar_3$ -; possibly * \hbar_2pi - $\hbar_2p(e)\hbar_3$ - > *pib-). His attempt at an explanation, which assumes that the laryngeal had already vanished or had disappeared by dissimilation with the following one, is not convincing: the first is at variance with irte ijate etc., and the second is an arbitrary assumption. The conclusion from this that the first laryngeal was \hbar_3 again prohibits the connection with European ab-.

87 The long article by Szemerényi, Glotta, 33 (1954), 238-65, in which he defends *dhmbh-/dhmsy-as PIE basic forms, is not a happy one. It consists of a series of improbabilities, of which the following may be mentioned. The phonetic law mbh > Gr. μ is (further) based on θρόμβος, of which, however, the μ is unexplained if it belongs with τ ρέφω; if it does not, it loses its value; the same applies to π ύνδαξ as against π υθμήν. The law is refuted by words like ὀμφαλός, see p. 74. The idea of foreign origin of these words is an obvious one, certainly in comparison with words like κόρυφος — κόρυμβος (with which κόρυνθος is probably connected), where the m cannot possibly be interpreted as PIE

If τραῦμα is the original form, τρῶμα can be understood by the association with τιτρώσκω. In view of τορεῖν, the form τιτρώσκω seems to have a root * $ter\hbar_3$ - (p. 233), so that τραῦμα cannot have been derived from it. Boisacq places s.v. τείρω the following forms together: τρᾶ-(νής), τρη-(τός) τέρε-(τρον), τρω-, τρί-(βω) and τρύ-(ω, - χ ω, -πάω). This would lead to * $ter-\hbar_1/\hbar_2/\hbar_3$ (with * $tr-\hbar-i/u > tr-i/u-\hbar-?$), so that * $tre\hbar_2u-m_p$ > τραῦμα is possible, but such an interchange of enlargements is not willingly accepted.

If the analysis of these two words is correct, this shows how misleadingly loan words can be fitted into the framework of one's own language.

The old derivation of for instance $\tau \rho \alpha \tilde{\nu} \mu \alpha$ from *trəu- seems possible in itself, but contradicts the development $\partial i > \bar{i}$, $\partial u > \bar{u}$ assumed by Schulze. However, in the light of the laryngeal theory, having regard to the phonetic properties of the laryngeal (that is to say of the ∂), a form *tr\(\bar{v}u\)- is not probable: one expects here the laryngeal in consonantal function. For the development of *tr\(\bar{h}_2u\)- (>*\ta\(\rho\varphi\)-) see p. 216.

For φάος $<*\phi$ ά-Foς, cf. Skt. *bháti* 'to illuminate', a structure $*bh\hbar_2u$ - is conceivable (since here the laryngeal is preceded by an occlusive and not a sonant), but it is more probable that the laryngeal was consonantal in this position too; v. supra. As a result ϕ αυ- (π ι ϕ αύσκ ω II.) will be based on $*bh\hbar_2$ -eu-.

A difficulty is formed by the connection of χάος χάσκω with OHG giumo, which points to e-vocalism, $*\hat{g}h\hbar_1$ -eu-; $*\hat{g}h\bar{e}(u)$ - in OHG gëwon.

A laryngealistic explanation for $\alpha \tilde{v} \circ \varsigma$, Lith. $sa\tilde{u}sas$ (* $se\hbar_2us$) would imply that in * $s\hbar_2us$ -, Skt. suska, a development $\hbar u > u\hbar > \bar{u}$ did not take place.

⁽an opinion shared by Frisk). The m of *dhembh- is based on θάμβος; the fact that this has no e-vocalism has its parallels, but with zero grade one would expect *ταφος. Szemerényi explains it as a derivative of θαμβέω, but this could only be explained as transformation of the intensive *θομβέω (according to ταφών). However, there is no parallel of such a transformation, so that in my opinion θάμβος cannot be explained from *dh(e)mbh-. The perfect τέθηπα instead of the expected *τέτηφα (the analogic η being accepted), is explained by aspiration interchanges like κιθών/χιτών, φάτνη/πάθνη, βάτραχος/βάθρακος, ἄκανθος/ἄχαντος (Lejeune, Traité, p. 50). However, these words all convey the impression of being of non-IE origin. It is highly improbable that the last form of a system ταφών — *τέτηφα would have disappeared without trace, given the abundance of perfects with a stem ending in φ . Szemerényi's explanation of θωῦμα as a personal venture by Herodotus on the (sole!) example of Ion. τωὺτό as against Att. ταὺτό is, of course, entirely unacceptable. It may incidentally be remarked that there is no compelling reason to interpret the β in ϑ ῆβος as F.

IX. AFTER CONSONANT BEFORE VOWEL

Laryngeal after consonant before vowel disappeared without trace in Greek, apart from possible colouring of following e. This development is evidenced by among others the Greek cognates of the two words celebrated in the history of the laryngeal theory, Skt. pṛthúḥ and pánthāḥ, of which the former was explained in 1891 by De Saussure.

The comparison of Lith. *platùs* with Skt. *prthú*-, Gr. πλατύς leads to the following reconstruction of the PIE paradigm:

```
sg. nom. *pl\acute{o}t\hbar_2-u-s gen. *pl\acute{t}\hbar_2-\acute{e}u-s
```

In the same way Pedersen (KZ 32 (1893) 269; Cinq. décl., p. 54) explained pánthāḥ (Lat. pons):

```
sg. nom. *pont-ėħ<sub>1</sub>-s (Skt. pánthāḥ) gen. *pnt-ħ<sub>1</sub>-ós Skt. pathás pl. instr. *pnt-ħ<sub>1</sub>-bhis Av. padəbīš (Skt. pathíbhis)
```

In Greek one finds traces of this paradigm in the words π óvτος π άτος (the latter form could be the phonetic representation of the genitive). Here too there is no trace of the (antevocalic) laryngeal in Greek. (Cf. the Introduction, p. 9.)

None of the forms of * $st\bar{a}$ -, * $ste\hbar_2$ - has aspiration in Greek, while this has become general in Indian. $\Sigma \tau \alpha \nu \rho \delta \varsigma$ is of particular importance here if it goes back to * $st\bar{h}_2$ -eu-, rather than to * $ste\bar{h}_2u$ -; cf. p. 177 f.

The same may be found in ὀστέον as against Skt. ásthi, but here the original declension is less clear: $*\hbar_2 \acute{o}st-\hbar-i$ $*\hbar_2 st-\hbar-ei-s$ Kuiper, Notes, p. 63, comparing

ὄστρακον: ἀστράγαλος, but these words, having regard to their suffix, seem more likely not to be IE; cf. p. 51; in that case there is no indication of \hbar_2 . Hamp, Word 9 (1953) 135-41, thinks differently.

If Kuiper's connection (Glotta 21 (1933) 287 ff.) of κλοτοπεύω (only T 148, approximately 'to dawdle') with Skt. śrathnáti śrnthati 'to become soft, etc.' is correct, κλοτ- goes back to *kloth-. However, the structure of *kl-n-eth-mi would be exceptional. For $\sigma \pi$ see p. 194.

Also of importance here is $\mu \dot{\epsilon} \gamma \alpha$. Pedersen, Cinq. décl., p. 47 ff., has reconstructed the paradigm as follows:

```
sg. nom. *me\hat{g}-\acute{e}\hbar_2 (Skt. mah\tilde{a}-) gen. *me\hat{g}-\hbar_2-\acute{o}s Ved. mah\acute{a}s
```

In Gr. $\mu\epsilon\gamma\alpha$ -(λ o-) nothing shows the influence of the laryngeal.

'Eγώ, Skt. ahám is unclear. There is no indication of a suffix -ħom (Kuryłowicz, Etudes, p. 53). The origin of the -ω is not known. One might suppose *e \hat{g} -o \hbar /e \hat{g} -ħ-om. There is no proof of aspiration by \hbar_3 in Indian, which makes *e \hat{g} -e \hbar_3 /e \hat{g} -ħ₃-om uncertain. Only if one were to start from *e \hat{g} ħ-o/e \hat{g} ħ-om does èγώ show that the laryngeal disappeared without aspiration in Greek.

Skt. hánuh as against γ évu ζ presupposes a laryngeal, * $g\hbar_1$ -en-, of which, however, there is no further indication.

Θυγάτηρ as against Skt. duhitá is a somewhat different case. As evidenced by the Indo-Iranian forms, we have here a paradigmatic interchange *dhug \hbar_2 -t-/dhug \hbar_2 -t-(Kuiper, Notes, p. 21 ff.), i.e. interconsonantal laryngeal: in Greek, 9υγ α - in any case does not have the aspiration of Indian. See the Introduction, p. 8.

In the 3 pl. of athematic presents the laryngeal disappeared before the ending -onti, Skt. punánti < *pu-n-ħ-onti as against punáti punīhi. Corresponding to this are κάμνουσι < * $\hbar m$ -n- \hbar 2-onti, τάμνουσι < *tm-n- \hbar 1-onti, forms which facilitated the transition to the thematic declension.

Kuryłowicz has pointed out (Pr. Fil., in particular pp. 209-14) that the apparent exceptions to Brugmann's Law are explained by the original presence of laryngeals. For instance $j\acute{a}na$ - from $*\acute{g}on\hbar_1o$ - (not $*\acute{g}on$ -o-, which would have become $*j\~{a}na$ -). Consequently a laryngeal will also have disappeared in Greek $\gamma\acute{o}vo\varsigma$. In this category there are also a number of compounds of which the second component displays the same phenomenon, e.g. aja- $gar\acute{a}$ - 'goat-swallowing', with which the following comply in Greek:

```
δημο-βόρος (A 231; <*-g^uor\hbar_3o-, connected with βιβρώσκω), εἰροκ-όμος (Γ 387), ἱπποκόμος (Hdt.; *-\hat{k}om\hbar_2o-), δρυ-τόμος (Π 633 etc.; *-tom\hbar_1o-).
```

A laryngeal has also been lost from γένος βέλος (as against βέλε-μνον). Admittedly, apparent aniţ forms of * $\hat{g}en\hbar_1$ - also occur (γέγαμεν), but these can easily be explained as analogic formations; see p. 244. The possibility that seţ and aniţ roots, i.e. roots with and without laryngeal as enlargement (* $\hat{g}en$ -: * $\hat{g}en\hbar_1$ -), existed side by side

cannot be entirely excluded, but one may not avail oneself of it unnecessarily. It is a methodical requirement, in those cases in which the non-enlarged root cannot be imperatively demonstrated, to try to explain the existing forms on the basis of the disyllabic root before taking refuge in the *ultima ratio* of root variants in the protolanguage.

Three cases are stated which are claimed to demonstrate that the laryngeal caused aspiration in Greek too in this position, viz. $\pi\lambda\dot{\alpha}\vartheta\alpha\nu\nu$, and the endings of the 2 sg. aor. pass. in $-9\eta\varsigma$ and the 2 sg. perf. (act.) in -9α .

It is by no means certain that $\pi\lambda\dot{\alpha}\theta\alpha\nu\nu\nu$ 'kneading board or tray' (LSJ Suppl.) belongs with $\pi\lambda\alpha\tau\dot{\nu}\varsigma$ (and therefore has $\theta < t\hbar_2$). WP II 63 connects it with *pelā-, which is hardly more convincing phonetically ($\pi\lambda\dot{\alpha}$ - θ - $<*pl\hbar_2$ -dh- is impossible; see p. 245). Cf. $\pi\lambda\alpha\kappa\dot{\nu}\varsigma$ 'flat cake' and $\pi\lambda\alpha\kappa\epsilon\dot{\nu}\varsigma$ ' $\pi\lambda\alpha\tau\dot{\nu}\varsigma$, broad'. Non-IE origin must be considered: firstly many words for kitchen utensils are Mediterranean and secondly many words ending in - $\alpha\nu\nu$ are non-IE (Schwyzer, pp. 489 f.).

There remain the two endings. The connection of 2 sg. aor. pass. $-9\eta\varsigma$ with Skt. $-th\bar{a}s$ is probably incorrect. Within Indo-Iranian $-th\bar{a}s$ stands alone as against Iranian -ha, -sa < *-so, so that Indian innovation (though probably building on an ending with $t(\hbar)$) seems self-evident. In Greek there is no indication that $-9\eta\varsigma$ is older than the remaining forms of this series ($-9\eta\nu$, -9η etc.). One finds 9η beside an older η -series in intransitive-passive verb forms. The 9 occurs as present formant. Cf. Meillet-Vendryes, *Gramm. comp.*, p. 215, Prévot, *L'aoriste passif en* $-9\eta\nu$, Benveniste, *Origines*, pp. 188-210, in particular pp. 196 ff.

On the other hand, the comparison of 2 sg. perf. act. -9α with Skt. -tha is indisputable. Hitt. 2 sg. pret. -ta will, in view of the parallel form -ti in the present (which must go back to *-thi (-thei?), since PIE -ti would have become -zi), have a laryngeal. PIE $-t\hbar_2e$ gives Skt. -tha, but Gr. -9α would be at variance with the foregoing. Kurylowicz explains -9α by *- $\tau\alpha$ after $\phi \theta \chi$, comparing the generalization in Gothic of -t, which was phonetic after spirant (s, f, h). This is not a convincing explanation, since -9α is found exclusively after σ (starting from $oi \theta \alpha$ and $\eta \sigma \theta \alpha$). According to Frisk, "Suffixales -th- im Idg." (GHA 42 (1936) 2.42 f.), the θ is on the analogy of $-\theta t$. The latest to write on this was Cowgill, pp. 172 f. ($-\sigma \tau \alpha$ after labial and velar became $-\sigma \theta \alpha$).

The question of the tenues aspiratae in general or of the correspondence of Gr. $\varphi \vartheta \chi$ with Indian ph th kh cannot be discussed here. For s+tenuis aspirata at the beginning of the word see Hiersche, Unters.; for Greek pp. 176-231. But, whatever the explanation of $-\vartheta \alpha$ may be, the cases mentioned leave no doubt that the laryngeal after consonant before vowel disappeared without trace in Greek, possibly after colouring following e.

⁸⁸ Κόγχος, which has been connected with Skt. śankhá-, will be non-IE, in view of κόχλος, Kuiper, IIJ, 4 (1960), 245, n. 45. The form ὀνυχ-, Skt. nakhá-, mentioned by Schwyzer, p. 298, in this connection belongs to another category, since here the other languages point to gh, OHG nagal.

⁸⁹ It is striking that a very large part of the Greek material discussed by Hiersche seems to be of non-IE origin.

X. BETWEEN CONSONANTS

The majority of the cases of laryngeal between consonants are found in the so-called disyllabic roots (*TeRH-C*). Here the preceding consonant is usually a sonant, as a result of which complications occur in the zero grade (*TRH-C*). It therefore seemed best to discuss the disyllabic roots as a whole in a separate chapter (Chapter XI). The result is that most of the cases that belong in this chapter will be dealt with in the next one, so that the problem discussed here must be viewed in its relation to the following one. Consequently no conclusion can be given here; this may be found in the final conclusions, p. 265.

Here, then, we shall confine ourselves to those cases forming no part of a disyllabic root; usually an occlusive precedes them. The laryngeal in the position stated is usually represented by a vowel in Greek. The question that must be asked here is whether one must start from consonantal or vocalic laryngeal in the basic language. Thus Iranian points to a paradigmatic interchange of \hbar_2 and \hbar_2 in the basic word for $\pi\alpha\tau\dot{\eta}\rho$; Introduction, p. 8. It must therefore be asked whether the Greek α is based on generalization of \hbar_2 or whether the \hbar_2 was vocalized phonetically. That the latter was the case is evidenced by the disyllabic roots (TeRH-C; see p. 227 ff.) and for instance $i\epsilon\rho\dot{\phi}\varsigma < *is\hbar_1r\dot{\phi}s$ (infra). However, there are indications that the consonantal laryngeal was not always vocalized in Greek ($i\rho\dot{\phi}\varsigma$). It goes without saying that \hbar , which was a vowel in the proto-language, was a vowel in all languages.

The vowel that represents the laryngeal is an i in Indo-Iranian and an a in the other languages; 90 Greek, however, retained the original opposition between the three laryngeals and has $\hbar_1 > \varepsilon$, $\hbar_2 > \alpha$, $\hbar_3 > o$. To demonstrate this is one of the principal objectives of this chapter and the next one, while the question should also be considered of whether all dialects display the same development here.

The material that contradicts this view is very scanty (Schwyzer, pp. 340 f.). The connection between ματεύω μαίομαι (μαιμάω?) and μῶμαι is too uncertain to be able to serve as an argument. (Moreover, μἄ- cannot go back to * $m\hbar_2$ -; see p. 245.) The connection between σαχνός (Gal.) 'tender' (κρέα) and κατασώχω (Hdt.) 'to rub to pieces, pound' cannot offer any argument. For in general ω/α is no proof, since ω can be an apophonic form of $\bar{\alpha}$ which may not be known (in this case * $s\hbar_2gh$ -/ $so\hbar_2gh$ -is therefore possible); but the word does not have any etymology at all. For χατέω

of In Germanic u (see p. 187) sometimes appears, which is left out of consideration here.

χατίζω (Hom.; χάτις χάτος Boisacq, Schwyzer do not occur, only χατίς ἐπιθομία, χρῆσις Hsch.) a connection with *χῆτος (χήτεϊ Hom.) χῆρος is, however, self-evident. But it is impossible to connect these words with χάος, since this seems to have a stem χαρ-/χαυ-. In that case the origin of the η of *χῆτος is also unknown (unless it is assumed that these words have the root in common). The connection of ἁβρός with ἥβη is semantically possible but formally difficult: Lith. jega would suggest * jeh_1-g^n -, but in that case one would expect * ih_1g^n -> *iβ- rather than * jhg^n -in the zero grade. It therefore seems more probable that one has to start from * jeg^n - jeg^n -. Cf. p. 246. For γλῶσσα γλάσσα see p. 246.

Some aorist forms with α in the root, also where the full grade has \bar{e} , seem to present a difficulty here. Of the type $\pi \dot{\eta} \gamma \nu \nu \mu \iota \, \dot{\epsilon} \pi \dot{\alpha} \gamma \eta \nu \, (\sigma \dot{\eta} \pi \omega, \tau \dot{\eta} \kappa \omega)$, $\pi \tau \dot{\eta} \sigma \sigma \omega \, \ddot{\epsilon} \pi \tau \alpha \kappa \sigma \nu$ only $\mu \eta \kappa \dot{\alpha} \rho \mu \alpha \iota \mu \alpha \kappa \dot{\omega} \nu$ could go back to * $m\bar{e}$ -. But here and in the case of $\dot{\rho} \dot{\eta} \gamma \nu \nu \mu \iota \, \dot{\epsilon} \rho \dot{\alpha} \gamma \eta \nu$ and $\tau \mu \dot{\eta} \gamma \omega \, \tau \mu \dot{\alpha} \gamma \epsilon \nu$ with $\eta < \bar{e} / \ddot{\alpha}$ after sonant, the zero with $\ddot{\alpha}$ does not go back to * $\mu \dot{\eta} \dot{\eta}_{1g}$ - (etc.), since these forms would have acquired a long vowel phonetically (and in this way would have become equal to the full grade); see p. 245. The forms with $\ddot{\alpha}$ must therefore be analogic and it is easy to understand that here a zero grade distinguished from the full grade was created secondarily. Most of these forms do not seem to go back direct to a PIE basic type.

The material showing $h_1 > \varepsilon$, $h_3 > 0$ is likewise scanty.

The reading ἀσκεθής is too disputed to be reliable (see Frisk).

The interpretation of εὐθενέω (A.)/εὐθηνέω (h.Hom., Hdt.) is too uncertain to offer an argument here; see Frisk, I, p. 586 f.

μέτρον from * $m\bar{e}$ -, Skt. $m\acute{a}ti$, cannot go back to * $m\hbar_1 trom$, since this would have given * $\mu\eta$ -. A form * $m\hbar_1 trom$, with vocalic laryngeal after sonant, is not probable. One must therefore start from * $m\hbar_1$ -etrom; cf. Ved. $d\acute{a}tra$ - < $*d\hbar_3$ -etro-, $dh\acute{a}na$ - < $*dh\hbar_1$ -eno-.

μακρός is difficult; μῆκος may represent * $me\hbar_2\hat{k}$ os, but * $m\hbar_2\hat{k}$ - would also have been μ $\bar{\alpha}$ -(μη-). Lat. $m\bar{\alpha}cer$ cannot go back to * $m\hbar_2\hat{k}$ - either (one would expect * $m\bar{\alpha}c$ -). Av. masah- 'length', comp. $masy\mathring{a}$, superl. $masi\check{s}ta$ -, cannot go back to * $m\hbar\hat{k}$ - (this would have given *mis-). Phonetically speaking the only possibility seems to be * $m\hbar_2e\hat{k}$ - > * $ma\hat{k}$ - (in all languages), * $m\hbar_2\hat{k}$ - > μηκ-ιστος. In that case Avestan would have generalized the full grade. However, the adjectives ending in -ro- usually have zero grade (ἐρυθρός, ἀργός — Skt. $rjr\acute{a}$ -), and the neuters ending in -os full grade. The whole remains unclear.

It has already been pointed out that πο- in ποτός πόσις may go back direct to * ph_3 -; p. 175 ff.

δοχμός (II.) 'aslant' is connected with Skt. *jihmá- 'idem*', despite the difficulty of the anlaut (<*zizhma-<*dizhma-?). The stem vowel must then go back to a laryngeal, * $d\hbar_3 \hat{g}h$ -mo- (or * $d\hbar_3 \hat{g}h$ -mo-?). Assimilation from * $\delta\alpha\chi\mu$ ός is an arbitrary assumption: there are dozens of words with such vocalism and the same structure (Schwyzer, p. 492).

⁹¹ Is the laryngeal responsible for this unusual development?

A case of exceptional importance is ἱερός. The distribution of the various forms of this word in the inscriptions was investigated by Locher, *Unters.*, pp. 5-8. It was found that ἱερός occurs in Mycenaean (*ijero(jo)*, *ijereu*, *ijereja*, *ijerowoko*), Arcadian, Cypriot, Attic and Ionic (Western, Central, and Southern East Ionic — Miletus before 500 —); ἱαρός in Doric, NW Greek and Boeotian (probably from NW Greek) and Pamphylian (possibly under Doric influence); ἱρος on Lesbos and (ἱρός) in Northern East Ionic (Abdera, Thasos, Chios). Thessalian has ἱαρ- once, and for the rest ιερο-

The conclusion imposes itself that we are concerned here with a dialectically different development, in which $i\alpha\rho\delta\varsigma$ belongs in West Greek, $i\rho\delta\varsigma$ in Aeolic (going from there to Northern East Ionic?) and $i\epsilon\rho\delta\varsigma$ elsewhere. It must, however, be admitted that $i\rho\delta\varsigma$ cannot be shown in Boeotian and Thessalian and that Thessalian has $i\epsilon\rho\delta$, which would have to be ascribed to Ionic-Attic influence. Anticipating what follows, I believe that this material indicates that the dialects still had the form $i\epsilon\hbar_Ir\delta s$, that this developed to $i\epsilon\rho\delta\varsigma$ in West Greek and to $i\epsilon\rho\delta\varsigma$ in East Greek, whilst $i\rho\delta\varsigma$ might be Aeolic, from where it spread to Northern East Ionic.

The aspiration, which is absent only in areas with early psilosis, shows s. The immediately preceding stage was therefore *iseros isaros isros. Such an interchange of forms is very rare. However, one does find -αρος and -ερος side by side in μιαρός Hom.: -ερός Call.; βριαρός Hom.: -ερός inscr. of Rom. period; σκιαρός Pi., Pl.: -ερός Hom.; χλιαρός Epich., Hdt.: -ερός Alem.; πιαρός Hp.: -ερός Hp. (forms after Locher, op. cit., p. 13 f.). The ratio for this interchange is not known. It is striking that all have -ια/ερος. This suggests influence of ἱερός/ἱαρός (so Schwyzer thinks, p. 482; cf. especially p. 243 f.). Schwyzer traces the forms of ἱερός back to an old neuter, as with ὕδερος Hp.: ὑδαρής Hp.: ὕδρος Il. from ὕδωρ etc. In itself this is of course possible, but the geographical-dialectal distribution is not explained in this way. This points to dialectally different development of one and the same basic form. That is confirmed by Ved. iṣirá- 'vigorous, lively'. The semantic side now forms no further problem. The Greek word, divided by W. Schulze, Quaest., pp. 207 ff., into four etyma, is now interpreted as "worin sich eine besondere, über dem Menschen stehende 'Macht' wirksam erweist' (Locher, p. 64, with specifications such as "ausserordentlich stark" (of a town), "- bewegt" (of a river), "von unvergleichlicher Impulskraft''). This meaning is consistent with that of iṣirá-, which has a cognate in ișnáti 'to bring into violent motion'. The connection is established beyond any doubt by the corresponding connection in ἱερὸν μένος and Ved. iṣiréṇā mánasā (instr.); for a recent view of this syntagm see Schmitt, Idg. Dichterspr., pp. 88-90. The connection with iṣṇáti points to a disyllabic root *isħ-. This leads to the reconstruction *ishrós, from which ἱερός can also be derived, provided that *ish₁rós is assumed. The Aeolic form, which must go back to *isros, has therefore lost the consonantal laryngeal. The same phenomenon is found in the Thracian river name⁹² *Ιστρος⁹³

⁹² For the connection with rivers cf. ἱερὸν ῥόον 'Αλφειοῖο Λ 726, cf. Hes. Op. 566 and the use in connection with ποταμός κ 351 and Hes. Th. 788.

Būga, Rev. ét. slav., 6, 9f., derives Istr- from *Instr-.

(Hes. Th. 339); for sr-> str- in Thracian (?) cf. Στρύμων, which will stem from the root *sreu- 'to flow'. Perhaps the river name Isara (Celtic?) also belongs here, though it may also belong to the European substratum (in view of the suffixes of the type ar(a), al(a), am(a)).

The Doric form $i\alpha\rho\delta\varsigma$ thus presupposes $\hbar_1 > \alpha$. It will have to be examined to what extent Doric thus had a different development from the other dialects. It is conceivable that the α here came into being under the influence of the ρ .⁹⁴

ἄνεμος, which is entirely isolated in Greek and therefore may be mentioned here, is dealt with under the disyllabic roots.

I see no phonetic basis for Cowgill's idea (p. 154) that \hbar_1 and \hbar_3 became ϵ and o respectively only in the vicinity of sonants. As a counter-argument one can point to ἐγείρω etc., see the list on p. 68 f., and the above ποτός δοχμός (and ἱερός, where at least the preceding consonant is not a sonant).

Needless to say, this conclusion will not be used in Chapter XI, since it is itself based on that chapter.

The connection with Celt. *isarno- 'iron' (Gall. Isarno-, OIr. iarn etc.), from which the Germanic words have been borrowed, Goth. eisarn etc., encounters the difficulty of the long i. This could be explained only as Illyrian development of *ei-, Pokorny, KZ, 46 (1914), 292. However, this remains an unverifiable hypothesis. Semantically speaking, Kuiper's interpretation of νώροπι and εὐήνορα (see p. 75 f. of this book), epithets of χαλκός, as 'full of vital energy', would be a neat parallel, for the meaning of ἱερός seems to have been about the same (supra).

XI. AFTER SONANT: THE DISYLLABIC ROOTS

In the sequence consonant — sonant — laryngeal special developments occur. Such a group is found most frequently in the so-called disyllabic roots. The problems that these forms present can best be discussed in their interrelation.

Attention was first drawn to the importance of these roots by De Saussure, *Mémoire*, p. 239 ff. A term of Indian grammarians is used to describe them: set roots, as against the anit roots ('with' and 'without i') on the strength of the comparison of Skt. $t\acute{a}ri$ -tum: $dh\acute{a}r$ -tum, bhavi-tum: $\acute{s}ro$ -tum ($\acute{s}ro$ -<* $\acute{k}leu$ -).

Here the same pointless controversy prevails as referred to in a preceding chapter (p. 89ff.). Hirt reconstructs for these roots basic forms of the type *pelā-; Benveniste (Origines, pp. 147-73), building on De Saussure's hypothesis of the consonantal ϑ (the laryngeal), operates solely with the historically demonstrable forms *pel- \hbar_2 -: *pl-e \hbar_2 -, parallel to *ter-s-:*tr-es-, which he regards as a biconsonantal root *pel- with enlargement (\hbar , s) or suffix ($e\hbar$, es). Thus, according to this view, the 'disyllabic' roots in PIE in no way differed from other three-consonantal roots, but the special development displayed by this group justifies a separate name; consequently the current nomenclature will be maintained, although it is therefore meaningless.

One of the main aims of this book is to demonstrate that the distinction between the three PIE laryngeals was preserved in Greek. Consequently it will be investigated in the following to what extent the disyllabic roots are of importance to this problem. They will therefore be classified on a basis of the nature of the laryngeal. There is the greatest agreement on the development of those with \hbar_2 , while these also form the largest group, so that it seems appropriate to begin with them.

A. DISYLLABIC ROOTS WITH h_2

As the first consonant of the disyllabic roots is usually an occlusive, and the second a sonant, they may be suitably symbolized by *TeRH*.

As stated, there is a large degree of agreement on the development of the disyllabic roots with \hbar_2 . For Greek one assumes:

⁹⁵ It is of course entirely pointless to say that there is an essential difference between these two (with suffix interchange ek/k, en/n etc. is possible, with enlargement (k, n, t) it is not), since the assertion can neither be proved nor refuted; cf. Kuiper, *Notes*, p. 6, n. 1.

full grade I $TeRh_2 > TeRa$

full grade II $TRe\hbar_2 > TR\bar{\alpha}$

and with o-vocalism:

 $ToR\hbar_2 > ToR\alpha$

 $TRoh_2 > TR\omega$

In addition one finds $TR\bar{\alpha}$ at places where one would expect a zero grade, i.e. TRH, while moreover a form $T\alpha R\alpha$ is frequent. The last two forms will be discussed after the survey of the material (p. 189 ff.), but for clarity's sake the form which is regarded here as the original one $(T_{\kappa}^{\alpha}\hbar_{2})$ and $T_{e}R\hbar_{2}$ respectively) has already been stated here and there.

A short survey of the representations found in the other languages is useful for what follows.

In Indian the full grade I appears as TaRi. The i of this is sometimes long, but this is based on an innovation which is unimportant to PIE. The zero grade has $\bar{\imath}r$, $\bar{\imath}r < r\hbar l\hbar$, $\bar{\imath} < m\hbar m\hbar$. The distinction between i and u in $\bar{\imath}r/\bar{\imath}u$ does not go back to PIE (at the beginning of the word only $\bar{\imath}r$, after labials only $\bar{\imath}u$, AiGr. 1, p. 28 and Kuiper, $Die\ Sprache$, 7, p. 15 with n. 4). The forms $\bar{\imath}m$ $\bar{\imath}m$ have their m n possibly through analogy. For forms corresponding to $T\alpha R\alpha$ see p. 208.

IRANIAN has TaR for both the full grade I and for the zero grade (in Avestan this is written ara; the representation of PIE r is written here as ara).

In Balto-Slavic a trace of the laryngeal after sonant may sometimes be found in the stress. Lithuanian has here an acute, $\acute{e}r < er\hbar$, $\acute{a}r < or\hbar$, $\acute{i}r/\acute{u}r < r\hbar$, while PIE r became $i\tilde{r}$. The representation $\acute{i}r/\acute{u}r$ does not point to historical connection with Indian $\bar{i}r/\bar{u}r$, as emerges from the fact that Iranian has an entirely different development (supra).

Serbian has in the zero grade $\tilde{r} < r\hbar$, $\tilde{u} < l\hbar$, $\tilde{e} < r\hbar$ $n\hbar$ (as against \hat{r} \hat{u} $\hat{e} < r$ etc.). In Germanic the laryngeal was usually lost without trace $(ur < r \text{ and } r\hbar)$, but sometimes appears as u (in circumstances to be further determined, see p. 153, 202).

CELTIC has in the zero grade $r\bar{a}$ $l\bar{a}$ $m\bar{a}$ $n\bar{a}$, but also ar al am an (Lewis-Pedersen, pp. 4 ff.; the representation of the sonants is very complicated: one finds in part ri li, and in part ar (ra) al (la) and partly em en, partly em en, but not in all dialects in the same way). The type ara also occurs. (Cf. Watkins, Eriu 18 (1958) 85-101. Hamp, Evidence, p. 227 n. 2, doubts that $ext{ar}$ etc. can be a phonetic representation of $ext{rh}$.)

LATIN has in the zero grade $r\bar{a}$ $l\bar{a}$ $m\bar{a}$ $n\bar{a}$. The reduced grade seems to have had ara, and the full grade era (ora), but the second vowel has in most cases either been weakened or entirely eliminated.

For $ToR\hbar$ one would expect $T\bar{a}Ri$, but no case of this is known to me.

⁹⁷ Burrow's view, Skt. Lg., p. 86, that $n\hbar$ became \bar{a} , but $n\hbar$ becomes $\bar{a}n$, is in my opinion refuted by $dhv\bar{a}nt\dot{a}$.

1. Material for the Disyllabic Roots Ending in \hbar_2

This survey is based on the material in Brugmann, *Grundr.*, I² 1, pp. 417-23 and 473-81, Hirt, *Idg. Gramm.*, 2, pp. 103-47, and Schwyzer, pp. 359-63, and more recent literature. It makes no claim to be exhaustive, although most of the material has probably been collected in this way.

There are only very few cases in which the second consonant of the root is not a sonant but an occlusive.

πετάννυμι Hom. has the forms πίτνημι (Hes. πίτνω), πέτασε, πέπταμαι, πετάσθησαν. The present πίτνημι corresponds to the Indian ninth class (De Saussure, *Mémoire*, p. 240, Benveniste, *Origines*, pp. 159 ff.), cf.

$$pavi-tum$$
 $pu-n-\bar{a}-ti$ from * $peuh$ - * $pu-n-eh-ti$
πέτα-σε πίτ-ν-η-μι from * $peth_2$ - s - * $p_et-n-eh_2$ - mi

(The question of the ι remains out of consideration here.) On the agrist πέτασσε, incorrectly analysed as πέτασ-σε (Chantraine, Gr. Hom., pp. 409 f.), πετάννυμι was formed. The origin of the present forms may therefore be sketched as follows:

πίτνη μι Hom. (aor. πέτασσεν Hom.)
$$\rightarrow$$
 πετάω Luc.
$$\downarrow \qquad \qquad \downarrow$$
 πίτνω Hes. πετάννυμι Ar. \rightarrow πεταννύω X.

(The original system is interspaced.) The perfect $\pi \epsilon \pi \tau \tilde{\alpha} \mu \alpha t$ (II.) has the expected zero grade * pth_2 -. There is no reason why this form should be secondary (Schwyzer, p. 770,6, and recently Frisk, II, p. 520; $\pi \epsilon \pi \lambda \eta \mu \alpha t$ etc. do not of course furnish proof, since here the second consonant is a sonant; the exceptional form therefore points much more towards great age, since its origin can in my opinion hardly be explained by analogy; one would then expect the stem form $\pi \epsilon \tau \alpha(\sigma)$ - instead, which one consequently finds in $\pi \epsilon \pi \epsilon \tau \alpha \alpha t$ (D.S.), $\pi \epsilon \pi \epsilon \tau \alpha \tau \alpha t$ (E.)). A derivative is $\pi \epsilon \tau \alpha \lambda \alpha t$ 'leaf'. Πατάνη 'a flat dish' (Sophr.) could be based on * $p_e th_2$ -, like Lat. pateo, if the connection with this root is correct: one may envisage a loan word here, cf. $\pi \lambda \alpha \theta \alpha t$ ov, p. 181. Assimilation from * $\pi \epsilon \tau \alpha t \alpha t$ (Schmidt, KZ 32.355 f.) is not probable, since words with $T \epsilon T \alpha t$ are frequent ($\pi \epsilon \tau \alpha \lambda \alpha t$), $\sigma \epsilon \alpha t \alpha t$

Entirely parallel is σκεδάννυμι (Thphr.). One finds (δια-)σκίδνημι, σκίδναμαι

(II.), σκεδάσω (Thgn.), σκεδῶ (Att.), σκέδασα (II.), ἐσκέδασμαι (X.), ἐσκεδάσθην (II.). Forms without initial σ- also occur. Derivative σκέδασις (Od.); it is not surprising that one does not find the normal zero grade here (*σκοῖα-?). And yet there is no indication of *skedħ₂- in the related languages; these point rather to a present *sk(ħ₁)-n-ed-mi, con. *sk(ħ₁)-en-d-ō (Av. sčandayeiti).

To this group also belongs ἔπτατο 'to fly' (aor.; II.; πτἄμένη *ibid.*). Coni. πτῆται O 170. The present πέτομαι will go back to * $pet\hbar_2$ -o-. However, in that case one must assume that the thematic vowel e has been restored analogically, for \hbar_2 -e would have given α (in Homer the forms with ε predominate; with o only πέτονται and (ἐ)πέτοντο). The form πίτνω (A.) = πίπτω 'to fall' is perhaps a remnant of the original nasal present. The latter form may have the long ι on the analogy of ῥίπτω, and further be based on *pi- $pt\hbar_2$ -e/o-. For πότμος ποταμός see p. 240.98

However, the great majority of the disyllabic roots have a sonant as the second consonant, representing a type *TeRH*-.

It cannot always be made out for certain whether one is concerned with a set or with an anit root. This is particularly difficult in the case of words isolated in Greek without convincing etymology. The material encountered in the literature will therefore have to be divided among a number of groups on the strength of the reliability of the interpretation, viz. as follows:

- (a) Non-IE words;
- (b) Words that have no disyllabic root;
- (c) Words of which the interpretation is very uncertain;
- (d) Words of which the disyllabic root cannot be demonstrated for certain;
- (e) Words practically isolated in Greek for which the other languages indicate disyllabic root;
- (f) Words of which various apophonic forms occur in Greek which indicate disyllabic root.

It follows from the nature of this classification that the division between these groups is not a sharp one. It will be clear that for the further discussion only the last two groups are of importance.

a. Non-IE Words

A number of words that are involved in the discussion do not have a convincing IE etymology and by their structure suggest that they have been borrowed from a non-IE language.

ἄμαθος (beside ψάμαθος II.; ψάμμος μ 243 (Aeol. ψόμμος, LSJ Suppl.), ἄμμος Pl.). Although cognate with MHG sampt (OHG sant) a form PIE *samədho- is not probable on account of the a in the stem, while ψάμαθος also cannot be so explained. The word seems more likely to be non-IE, cf. Kuiper, Μνήμης χάριν, I, p. 218

⁹⁸ For the semantic side of this connection see R. Schmitt, *Idg. Dichterspr.*, n. 301: the meaning 'to fly' originally in the present (imperfective aspect), 'to fall' in the aorist (perfective aspect).

with n. 34: *(p)sam-/sab(h?) (cf. ψῆφος ψαφαρός, Lat. sabulum); Central European? Cf. in Krahe, $Spr.\ u.\ Vorz.$, p. 58, the elements sal(a)-, albh-, am(a)-, -ma-, with which a form sabh(a)-ma- corresponds in structure.

In this way θ άλασσα beside δαλάγχαν θ άλασσαν Hsch. with interchange θ/δ and $\chi/\gamma\chi$ also points to non-IE origin (cf. Kuiper, Μνήμης χάριν, I, p. 225). (For an entirely different interpretation see p. 209).

 γ ν ά θ ο ς (Ion.-Att.; γ ναθμός Hom.) is connected by some with Lith. \dot{z} ándas < * \dot{g} on h_2dh -, but the form γ νάθος cannot be explained by * \dot{g} n h_2dh - (see p. 245). Analogously κναδάλλεται· κνήθεται Hsch. is connected with Lith. \dot{k} ándu 'bite, sting' positing a stem * \dot{k} on h_2d -. But the comparison of $\dot{\gamma}$ νάθος with κναθ- (cf. also κάναδοι· σιαγόνες, $\dot{\gamma}$ νάθοι Hsch.) points with $\dot{\gamma}$ /κ and $\dot{\theta}$ /δ to a non-IE language. Other members of this group are κνώδαλον (ρ 317) 'wild creature', κνώδων 'teeth on a hunting spear'. Κνώδαλον recalls κνώψ (Nic.), κινώπετον (Call., Nic.; cf. ἑρπετόν) 'venomous beast', κνωπεύς· ἄρκτος. ἔνιοι κνουπεύς Hsch., κυνοῦπες· ἄρκτος (sic). Μακεδόνες Hsch. Further members of this group are perhaps κνάπτω 'to card, comb (wool), full, mangle, tear', κνέφαλλον $\dot{\gamma}$ νάφαλλον $\dot{\gamma}$ νόφαλλον with $\dot{\kappa}$ / $\dot{\gamma}$ and interchange ε/α/ο, which can hardly be based on IE ablaut. For the further connection with -κναίω κνῆν cf. ψαίω ψῆν (with which ψάμαθος is connected, \dot{s} \dot{u} 0, \dot{u} 1 \dot{u} 2 \dot{u} 3 \dot{u} 3 \dot{u} 4 \dot{u} 5 \dot{u} 6 \dot{u} 6 \dot{u} 7 \dot{u} 8 \dot{u} 9 \dot

For the same reason the following group of words, which appear to have been derived from the same root, seem non-IE:

```
κέραφος — σκέραφος — σχέραφος κερβολούσα — σκέρβολος κέρτομος
```

Of the same kind is the interchange κόναβος: κόμπος 'din, clash'.

κνῆκος 'safflower, Carthamus tinctorius' cannot be connected with Skt. $k\bar{a}\bar{n}cana$ as $*k\eta\hbar$ -k-, since this would have given $*k\bar{a}k/c$ - in Indian. Furthermore, OHG honag etc. can hardly be connected with this root. The meaning (the name of a plant) suggests borrowing.

κάλαθος 'basket' is connected with κλώθω 'to spin', which is not very convincing from the semantic point of view. Cf. for the suffix γύργαθος κύαθος λήκυθος and further κάνασθον κάναστρον 'basket'.

b. No Disyllabic Root

For a few words that are sometimes mentioned in this connection the related languages demonstrate that we are not concerned with a disyllabic root.

It is improbable that $\tau \alpha \nu \alpha \dot{\alpha} \dot{\alpha}$ is based on a disyllabic root, in view of Skt. tanvi, not * $t\bar{a}v\bar{\imath} < *t\eta\hbar u$ - $i\hbar_2$. The word occurs in Homer only in Π 589 and in $\tau \alpha \nu \alpha \dot{\eta} \kappa \eta \varsigma$ (only in $\tau \alpha \nu \alpha \dot{\eta} \kappa \kappa \ddot{\alpha}$) beside $\tau \alpha \nu \nu \dot{\eta} \kappa \eta \varsigma$ and ($\mu \ddot{\eta} \lambda \alpha$) $\tau \alpha \nu \alpha \dot{\alpha} \delta \alpha \iota$ 464. Outside Homer its occurrence is also very limited, although a few other compounds with $\tau \alpha \nu \alpha$ - are found. The formation of the word is not clear. The comparison with Lith. tinti 'to swell, breathe heavily' should be abandoned in view of the meaning. However, the similarity to Corn. tanow < *tanawo- is striking. One is reminded of the

incidentally also unclear Lat. $gravis < *g^ur_ewi$ - (as against $*g^u_eru > βαρύς$, infra); ταναρός thus from $*t_en_ew -o$ -? According to Szemerényi, Syncope, pp. 157 ff., ταναρός is built on *ταναρία, the feminine of *τανύς. But in that case the masculine here would have been derived from the feminine at an earlier stage than κραταιός from *κραταια (cf. p. 249 n. 122), since otherwise one would expect *ταναιός. The demonstrable forms do in fact suggest this; besides the fact that the Celtic forms seem to go back in part to *tanawyo- (OIr. tanae etc.), and in part to *tanawo-, ταναρός also occurs in Mycenaean, tanawa 'slender' (description of wheels; see Chadwick-Baumbach, Glotta 41 (1963) 157-270 s.v.).

Nor are $\beta \alpha \rho \dot{\nu} \varsigma$ and Skt. $gur\dot{u}$ - based on a disyllabic root, in view of Skt. fem. $gurv\dot{t}$. Lat. gravis is unclear (* $g^ur_e u\dot{t}$ -?), but in any case not from * $g^ur\hbar$ - $u\dot{t}$ - (* $g^ur\partial u\dot{t}$ -; this would have given * $gr\bar{a}vi$). Skt. gariman- 'weight' is meaningless, since -iman was secondarily extended at an early stage.

γάλα γάλακτος (II.) beside γλάγος (II.), κλάγος γάλα. Κρῆτες Hsch., γλακῶντες μεστοὶ γάλακτος Hsch., γλακτοφάγος and Lat. lac point to *glak(t)-. A disyllabic root is therefore out of the question. It may be doubted whether this word is of IE origin.

c. Words of which the Interpretation is highly uncertain

The interpretation of a few words is so uncertain that they must be left out of consideration further.

That δάμαρ (II.) goes back to the root *demħ₂- 'to build' (Benveniste, *Origines*, p. 30) is not semantically convincing; moreover, * $d_em\hbar_2rt$ - (* $dm\hbar_2rt$ -?) may perhaps have given δάμαρ, but Aeol. δόμορτις γυνή Hsch. presupposes * d_emr -t- instead. See Add. to p. 202.

Fraenkel, Etym. Wb., disclaims any relation between $\delta \rho \bar{\alpha}$ - (δράω δρᾶμα) and Lith. darýti 'to make, do' (causative of derëti 'to serve') or dárbas 'work', dìrbti 'to work'. There is no further indication of disyllabic root for the Greek word.

For $\delta \alpha \rho \vartheta \dot{\alpha} v \omega$ (Hom. only $\xi \delta \rho \alpha \vartheta o v$) Skt. $dr\bar{a}ti$ on the one hand and OCS $dr\check{e}mati$, Lat. dormio on the other hand could suggest $*dr-e\hbar$ -: dr-em- (OCS $*dr\bar{e}m$ -, Lat. *drm-). In that case $\xi \delta \rho \alpha \vartheta o v$ supposes a third enlargement of this root, *dr-edh-(*dr-edh-). There is consequently no reason to assume that this form ever had a larvngeal.

κέραμος 'potter's earth' has no etymology; the connection with κεράσαι is semantically weak.

The connection of τέραμνον (usually pl.) 'chamber, house' (the reading τέρεμνον is uncertain) with Lat. trabs, trabes 'beam, timber', Osc. tríibúm [trēbom] 'domum, aedificium' (with ē), Lith. trobà 'building, house' (with ā) cannot be explained by IE ablaut. Celtic, OW treb 'habitation' and Germanic, OE -brep have *treb-Cf. OBrit. treb 'division of the people', ON borp 'small enclosure, crowd'. The possible connection between these words is, within PIE, unclear from the formal point of view.

ἀτέραμνος 'merciless (Od.), hard' (τέραμνον ἀπαλόν, ἑψανόν Hsch.; τεράμων 'becoming soft by boiling' Thphr.) can hardly be connected semantically with τρ $\bar{\alpha}$ νής 'clear, distinct' (S.). The suffix -αμνο- may suggest non-IE origin, but analysis *terħ₂-mno- remains possible; further connection with Skt. taruṇa- 'tender' should then be considered.

d. Words for which Disyllabic Root cannot be demonstrated

For the following words allowance must be made for the possibility of disyllabic root.

 $\chi \alpha \lambda \dot{\alpha} \zeta \alpha$ 'hail' may be cognate with OCS *žlědica*, Slov. *zlěd* 'glazed frost' as ${}^*\hat{g}h_el\hbar_2d_-$, ${}^*\hat{g}hel\hbar_2d_-$.

χέραδος 'silt, gravel and rubbish (brought down by torrents)' has been compared with Lith. *grúodas* 'frozen rubbish in the street'. Within Greek it may be connected with χαράδρα 'torrent' (= Heracl. χάραδος, Buck, *Gr. Diall.*, p. 373).

κέλαδος 'loud noise, din' has $-(\alpha)\delta$ ος, like many other words indicating a noise, χρόμαδος (infra), ὅμαδος, ἄραδος, ῥοῖβδος, ὀρυμαγδός. Connection with καλέω (see p. 235) is possible only as *kelħ₁- + -αδος. The gloss κέλωρ φωνή Hsch. and κελαρύζειν do not stand in the way of the supposition of a disyllabic root (*kelħ₁- $\bar{o}r/kel\hbar_1$ -r, see p. 202; however, from *kelħ₁-r one would expect *κελερ).

χρόμαδος (γενύων Ψ 688) 'crashing sound', χρεμετίζω (II.) 'to neigh, whinny', χρέμπτομαι (E.) 'to cough' does not suggest disyllabic root if the last form belongs with the others. Χρεμετίζω may have a formative et, like ed in OE grymettan, gremettan, OHG gremizzōn 'to roar' (here, therefore, *gremħ-et- remains possible). For -αδος see s.v. κέλαδος.

στενά χω στοναχή (cf. καναχή) finds support for disyllabic root in Skt. stani-hi, stanáyati (<*stonhéieti), abhi-ṣṭaná- (<*stonho-, cf. ἀγάστονος μ 97). Whether the Gallic river name Tanaros belongs here is very dubious.

If the original meaning of $\varphi \dot{\alpha} \lambda \alpha \gamma \xi$ is 'round piece of wood, trunk, log' it could be cognate with Lat. (suf-)flāmen 'clog, break', from *bhlħ2g-s-; Lith. balžiena, OHG balko, OE bealca, ON bolkr from Germ. *balk- < PIE *bholħ2g-? For Lat. fulcio < *bholħ2-k- one should, however, bear in mind the objection of Ernout-Meillet that PIE did not have any roots with aspirate — voiceless consonant (bh — k). However, it is the question whether this also applies to a second enlargement. And yet one must consider non-IE origin for the Greek word, especially in view of the nasal in $\varphi \alpha \lambda \alpha \gamma \gamma$ -.

For $\tau \in \nu \alpha \gamma \circ \varsigma$ 'shoal water, shallows, lagoon' cf. Latv. tigas (< *tingas) 'depression between two shallows', Lith. stingti 'to congeal' (for the meaning cf. Skt. $sty\acute{a}yate$ 'to congeal', $stiy\bar{a}$ 'stagnant water'). However, it is not certain that stingti goes back to $*sty\hbar g$.

βάραθρον, Arc. ζέρεθρον (with $\zeta < \delta$; δ in Hsch.), Aeol. βέρεθρον. The different development of the labio-velar (βα: δε) points to an original opposition between reduced grade and full grade, $*g^u_e r\hbar$ -: $*g^u e r\hbar$ -. One would prefer to ascribe the different forms to dialectal development (cf. p. 183 on ἱερός) (i.e. for instance $*g^u_e r\hbar$ -> δερε-/βαρα-), but there is insufficient support for this (see p. 259 ff.). If the laryngeal was \hbar_2 , then ζέρεθρον βέρεθρον must have been assimilated from $*\beta$ ερα-. But it is also possible that βάραθρον stands for $*\beta$ αρε- $<*g^u_e r\hbar$ - if $e^r\hbar$ 1 became αρε and not ερε: cf. p. 227 ff. The difficulty remains the same if one tries to attach a formative -εθρον to the disyllabic root: both - $\hbar_1 e dh r o m$ and - $\hbar_1 dh r o m$ give -εθρον, both - $\hbar_2 e dh r o m$ and - $\hbar_2 dh r o m$ give -αθρον. For the supposed connection with βιβρώσκω see p. 234. The connection with δέρη (Frisk) should be abandoned, on account of both the difference in meaning (δέρη in the first place 'neck') and the form (Aeol. δερα as against βέρεθρον); this word in any case does not have a disyllabic root, as emerges from Arc. δερ_Γα.

It does not seem impossible, partly in view of the meaning, that the word is non-IE. For the structure of the word and the suffix cf. μάραθρον, Schwyzer, p. 533.1, κάναθρον, *ibid.*, p. 532.3, κμέλεθρον/μέλαθρον (p. 215 n. 107 of this book) and σπάλαθρον, *infra*. However, for $\beta/\delta(\zeta)$ one would have to assume a kind of labiovelar in the substratum language. There are in fact various indications of this. These divide into three groups.

- (1) Interchanges of labials, gutturals and dentals in substratum words.
- (a) Interchange of labial and guttural: σπάλαθρον σπαύλαθρον σπάλαυθρον: σκάλαυθρον σκάλευθρον (v.l. σκάλεθρον); for α/αυ cf. ο/ου in ὀλόπτω: ὀλούφω (: λέπω) p. 42, and s.v. ἄλοξ, p. 40; the word — 'oven-rake' — has of course nothing to do with σπάλαξ 'mole' or σπάλαθρον 'a thorn bush'. Further (ἀ)σπάλαξ (ἀ)σφάλαξ: σκάλοψ (or metathesis?); Πυανεψιών Πανόψια: Κυανόψια; Πύδνα: Κύδνα, Πιερόν: Κιερόν; πόρνοψ πάρνοψ: κόρνοψ (a kind of locust), ?βράκαλον βόπαλον Hsch. For βλέπω/γλέπω, βλέφαρον/γλέφαρον (if these last two groups are cognate, they moreover display interchange π/ϕ), βλήχων/γλήχων dissimilatory loss of the labial element of the labio-velar is assumed (Schwyzer, pp. 298 f., Buck, Gr. Diall., p. 75). For the last pair, however, this is out of the question, so that another explanation must also be considered for the other words; cf. the counter-arguments of Lejeune, Traité, p. 38 n. 2. Foreign origin seems obvious (for instance through the meaning of βληχών: the name of a plant). In that case there is a good chance that βλωθρός/γλωθρός (despite West, see p. 215f.) also belongs to this series. In my opinion an other instance is ὀφθαλμός, Boeot. ὄκταλλος, Dor. ὀπτίλ(λ)ος. Frisk's "mit altem $\kappa\tau$, analogischem $\pi\tau$ und expressivem $\varphi\theta$ " does not seem to be the right explanation.

Note the accumulation of difficulties for IE origin in these words: $\lambda\mu/\lambda\lambda$, $\lambda/\lambda\lambda$, α/ι . For -αλμος cf. σχινδαλμός (for which the variants point to a substratum word: σχινδάλαμος, σκινδαλ(α)μός, σχιδαλαμός, σκιδαλ-εύω, σκινδυλεύω; see Hiersche, *Unters.*, pp. 215 f.); for α/ι cf. α/υ in the word just mentioned; the suffix $\upsilon\lambda(\lambda)$ (beside which $\iota\lambda(\lambda)$ is to be expected, in view of ι/υ in these words, cf. - $\iota/\upsilon\nu$ 9-, p. 71) is frequent in substratum words (Schwyzer, p. 485).

- (b) Interchange of labial and dental in substratum words: ἄμπυξ: ἄντυξ, σάμβαλον: σάνδαλον, πεμφρηδών: τενθρηδών, ὀβελός ὀβολός: ὀδελός ὀδολκαί, Περμησσός (Πάρμησσος): Τερμησσός, Παρνασσός: Τερνεσός (the same as the preceding item?), Πευμάττιος: Τευμήσσιος (M. L. West, *Hesiod, Theogony*, pp. 153 f.), ?Βριτόμαρπις (LSJ Suppl. s.v.): -μαρτις.
- (c) Interchange labial/guttural/dental in γέφυρα/βέφυρα/δέφυρα, for which Arm. *kamur-j* points to a substratum word on account of the interchange *bh/m* (Kuiper, Μνήμης χάριν, p. 213).
- (2) The labio-velar that forms the basis of these substratum words may still be pointed to in Mycenaean: qasireu: βασιλεύς, atorogo: ἄνθρωπος (Kuiper, loc. cit.), qeto: πίθος. The form qaratoro is perhaps the above-mentioned σπάλαθρον. However, karako 'glākhōn': βλήχων is striking. Cf. also the place-name sukirita 'Sugrita': Σύβριτα: see the footnote in Chadwick-Baumbach, p. 245. Myc. apuke (etc.) 'ampuk-' also does not have the q expected from ἄμπυξ: ἄντυξ (for ἄμπυξ in relation to horses LSJ Suppl. now gives the meaning 'bit').

The suffix oπ (Schwyzer, p. 496,3; p. 426 Zus. with n. 4) seems to me also to be an element of the substratum language; it will have developed from ok^u . It is found in the names of animals, which certainly belong to the substratum (σκάλοψ, πόρνοψ/πάρνοψ/κόρνοψ(/ἀκορνός), πηνέλοψ) and in the name of peoples that do not have an IE etymology (ഐ τέροψες, ελλοπες, Δόλοπες), and further in a number of words of which the meaning is unknown (ήνοψ, μέροψ, ?νῶροψ) and perhaps in a few other non-IE words (ἀστεροπή (cf. p. 51), ?καλαῦροψ). Chantraine, Mél. Cumont, pp. 121-8, draws attention to the fact that some names of peoples correspond to those of birds: 治έροπες, Μέροπες, Δρύοπες. His idea that the former were derived from the latter seems correct to me; cf. in Italy the Piceni (picus 'woodpecker' = δρύοψ), Hirpini, ? Lucani.

In my opinion Alθίοπες also belongs here, which therefore does not mean 'with burnt face' (as is still believed by Frisk s.v. α ίθω). This also emerges from the following consideration. The Thessalian name for a people Αἴθῖκες is evidently a formal variant of Αlθίοπες with the same meaning. Apart from the fact that here the meaning 'with burnt face' is much less obvious, this form is not explicable as a compound with PIE ok^{u} - (h_3ek^{u} -) 'face', for * h_2eidh -i- h_3k^{u} — would have given *Alθῖπες, certainly in an Aeolic dialect. Here one must either assume a non-IE element ok^{u} , which was able to give Thess. κ , or another suffix ($i\kappa$); in the latter case too it is probable that $o\pi$ is a suffix with about the same function and not PIE ok^{u} - 'face'. That in this word $o\pi$ developed from ok^{u} emerges from Myc. aitijoqo. Further one finds here pokiroqo (' $poikilok^{u}s$ '), which in my opinion contains the same suffix (cf. aiθός: aiθος: aiθος

It may be this same suffix that is also found with a few perhaps IE stems, e.g. ἠπεροπεύω, κλοτοπεύω (p. 180).

(3) On the strength of the so-called complex signs in the Linear B syllabary (twe two dwe dwo nwa, $tja\ rja\ rjo$) Palmer (e.g. Interpretation, pp. 38 ff.) assumed that the substratum language had labialized and palatalized consonants beside neutral ones, e.g. $k^u: k^i: k$. The most recent to publish on this was Lejeune, Proceedings Cambr. Coll. Myc. Stud., pp. 135-49. See Add.

Many details of the original forms and their development (evidently differing

dialectally or regionally) still call for an explanation. However, this requires a much more detailed examination of the material.

Finally, for the interchange ε/α in βαρα-/ζερε- which can hardly be explained from IE, compare κμέλεθρον: μέλαθρον, σκάλευθρον: σκάλαυθρον, εὐλάκα: αὐλάχα (p. 40 s.v. ἄλοξ), Περμησσός: Πάρμησος, Τερνεσός: Παρνασσός, Γεκεδαμος: Ἀκάδημος (γεκάδαμος).

βάλανος may be based on $*g^u_el\hbar_2-n$ -, but there is no clear indication of disyllabic root. Lat. glans gland-is could represent $*g^ul\hbar nd$ -. The Armenian form, which is the closest to Greek, kalin kalnoy, must have had a vowel e after the l and therefore cannot go back direct to $*g^u_el\hbar_2-en$ -, since this would have become $*g^u_el\hbar_2an$ - as early as the proto-language. However, without \hbar_2 the suffix -an(-d)- can hardly be explained by PIE. Striking is the d-suffix in Latin, Slavic (RussCS želudb < -qdb < -andi) and Albanian ($l\hat{e}nd$), while Lithuanian has $g\hat{e}le$, without n and d. One must consider non-IE origin (for n/nd cf. for instance Kuiper, Mvήμης χάριν, p. 215 ($-a\mu o \zeta / -a\mu \beta o \zeta)$, p. 216 ($-\iota v / -\iota v \vartheta$ -) and p. 221 f. ($\vartheta \rho \tilde{\omega} v \alpha \xi / *trond/t$ - in Slavic); for the semantic range cf. $\hat{e}\rho \hat{e}\beta v \vartheta o \zeta$, $\kappa \dot{v} a\mu o \zeta$, Lat. faba).

 $\pi \rho \bar{\alpha} \ddot{v} \varsigma$ (Pi.) will in the first instance go back to *prāiu- (the hiatus from loss of ħ (cf. σῶς, p. 249) or s would already have disappeared). The root syllable may represent full or zero grade (cf. γραῦς, s.v. γέρας, p. 201), i.e. *pr(e)ħ₂i- (*k^ur(e)ħ₂i-?).

e. Words for which Disyllabic Root can be rendered probable

 $\lambda \tilde{\eta} v \circ \varsigma$, Skt. $\tilde{u}rn\tilde{a}$, Av. $varan\tilde{a}$, Lith. vilna, Serb. vina, Lat. $l\bar{a}na$ all point to $*ul\hbar_2$ -n-. If Arm. gelmn is based on $*uel\hbar$ -mn-, the laryngeal must have disappeared. Strange is W. gwlan, explained as *ulana; this form, however, is identical with $*ul\hbar n$ -, for which one would expect the development $l\bar{a}$ in Celtic. MIr. olann has unexplained o. Kuryłowicz, Apophonie, p. 198, presupposes a compound form of $*ul\hbar n\bar{a}$, i.e. $*-uln\bar{a}$; cf. p. 242 ff.

εἰνάτερες 'wives of brothers' (II.; εἰ-m.c.; ἐνατηρ inscr.), OLith. jentė EastLith. intė, Phryg. ιανατερα, 99 Lat. ianitrīces, Skt. yātar- suggest a disyllabic root *jenħ₂-. Greek and Lithuanian would continue *jenħ₂-, Phrygian and Latin *jenħ₂-, Indian, *jnħ₂-. This ablaut doubtless stems from the declension, but the occurrence of three apophonic forms side by side is striking.

κάλαμος has a disyllabic root, as is evidenced by Russ. solóma, Serb. slầma < $*\hat{k}ol\hbar_2mos$. OPr. salme, Latv. salms, OHG halm, Lat. culmus have the same origin. However, there is no reason to assume that κάλαμος was assimilated from *κολαμος, for there are various words with this vocalism, see p. 206. OW calamennou, NW calaf, has the same apophonic form as Greek; however, allowance must be made for the possibility that these words have been borrowed from Lat. calamus (which has itself been borrowed from Gr. κάλαμος).

Forms like * $\hat{k}ol\hbar m$ -o- * $\hat{k}_el\hbar m$ -o and * $p_el\hbar m$ - \bar{a} * $p_el\hbar m$ - \bar{a} (in $\pi\alpha\lambda\dot{\alpha}\mu\eta$ and OIr. $l\dot{\alpha}m$

⁹⁹ However, the form ιανατερα appears in a Greek inscription (from Lydia); J. Keil u. A. v. Premerstein, *Reisen*, I, p. 78, No. 166.

infra s.v. $\pi\lambda$ ήσσω) seem to be thematizations of m-stems, having regard to the interchange in the stem vocalism. The clearest case of an old m-stem is the word for 'earth', Gr. χθών (cf. Kuiper, Notes, pp. 9 f., 86 ff.). Skt. kṣāḥ, Av. zå point here to an original nominative * $\hat{g}h^z\bar{o}ms$. The stem * $\hat{g}h^zom$ - is found in $\chi\theta$ ov- and Lat. humus < *homos; e-vocalism is found in OLat. hemo, stem hem-on-, Lith. žẽmė, ORuss. zemlja and probably also Skt. kṣámi (*ĝh²om-i would have become *kṣāmi), and Phryg. ζεμελω. The zero grade in gen. Av. zəmo, Skt. kşmáḥ (or rather jmáḥ, for which analogically $k \sin h$? for gm h see Mayrhofer s.v.) from $\hat{g}h^2m - \hat{o}s$ and Lith. žmu \tilde{o} 'human being' < * $\hat{g}hm$ - $\bar{o}n$ and perhaps Phryg. Γδαν. The reduced grade is found in Goth. guma $< *\hat{g}h_e$ m-en- and Gr. χαμα- and χθαμα- (χαμάδις χαμαί χαμᾶζε Hom.; χθαμαλός N 683 ι 25 \sim κ 196 λ 194 μ 101). Χθαμαλός is reminiscent of humilis and may go back to * $\hat{g}h^z_e m\hbar$ -lo-, cf. similis — ὁμαλός p. 208, where Greek has o-vocalism, like Latin in humilis; however, in both cases this may be secondary, after ὁμός and humus. The word for 'human being' therefore has the phases *ghem-ghm-on-(hemo guma žmu \tilde{o} respectively). It is not clear whether $*\hat{g}h^z_em$ - has a place in the original declension of 'earth' itself, for which $*\hat{g}h^z\delta m$ - $s\hat{g}h^z\delta m$ -m ($\hat{g}h^z\delta m$ -?) $\hat{g}h^zm$ - δs is, however, certain.

This does not throw much light on the declension of the above words: ${}^*\hat{k}ol\hbar_2m$ $\hat{k}_el\hbar_2m$ - δs (neuter?); ${}^*p_el\hbar_2m$ (beside ${}^*p_el\hbar_2m$) does not, however, seem to be an original nominative. Here too (as with $\chi 9 \omega v$) one is inclined to assume that the three phases formed part of one paradigm ($Tol\hbar m$ - $T_el\hbar m$ -).

κνήμη (Dor. κναμα), OIr. cnāim go back to *knām-. If OHG hamma 'hollow of the knee, ham' belongs here as *konħ2mā, both *kneħ2m- and *knħ2m- may be considered for Greek and Irish (for the ablaut see s.v. κάλαμος).

γέρανος 'crane' corresponds to Lith. $g\acute{e}rv\acute{e} < *ger\hbar_2-μ$. The form $*g_er\hbar$ -n- is contained in Gaul. (tarvos tri-)garanos '(bull with three) cranes', W. garan. Less clear are OHG kran-uh, Lat. $gr\bar{u}s$. (The verb is perhaps found in Skt. $grn\acute{a}ti$ 'to rustle, sing', jarit\acute{a}r- 'singer'.)

¹⁰⁰ The matter of initial consonantism remains out of consideration here; the formulation $\hat{g}h^z$ is followed here without commitment. For literature see *Evidence*, p. 20, n. 73.

κεραΐζω (II.) 'ravage, plunder' is a secondary present; Skt. śṛṇắti 'to break, smash' has the old form. OIr. docer 'he fell' has disyllabic root, - $\hat{k}er\hbar$ -. This stem is further found in ἀκέραιος and κέραυνος, which goes back to *κερα-γαρ/υν- $\langle \hat{k}er\hbar_2-y_r/un$ -. Cf. ἐλαύνω infra.

ν ῆ σ σ α, Boeot. νᾶσσα 'duck' may correspond exactly to Skt. $\bar{a}ti$ - 'a water bird', both from * $\eta\hbar_2ti$ -, while on the other hand Lith. ántis, Serb. $\tilde{u}tva$, Lat. anas (anatis), OHG anut, which all go back in the first instance *anat-, to cannot be separated from this. The two forms probably stem from one paradigm, but the obvious * \hbar_2 en \hbar_2 tis, gen. * $\hbar_2\eta\hbar_2$ téis seems to me to be out of the question, since * $\hbar\eta\hbar_2$ - would have given * $\tilde{\alpha}$ vā- in Greek; see p. 95. All that then remains is the reconstruction * $_e$ n \hbar_2 ti-s ($_e$ n \hbar_2 tis?) * $_\eta\hbar_2$ téis. (For the nominative with reduction vowel $_e$ cf. Kuiper, Notes, p. 19 f.)

 $\sigma \varphi \alpha \rho \alpha \gamma$ - The situation here is complicated. Probably a distinction has to be made between three groups.

- (1) A group of words for 'throat, gullet, gully': (ἀ)σφάραγος, φάραγξ, φάρυγξ, βρόγχος, βρόχθος, βράγχος, βάραγχος, βρακεῖν, βράξαι, βρόξαι. The group seems to be of non-IE origin, cf. Kuiper, Μνήμης χάριν, p. 221.
- (2) The word for 'asparagus' ἀσπάραγος (ἀσφάραγος Att.). The beginning of the word, ἀσπ-/ἀσφ-, and the fact that it is the name of a plant suggest non-IE origin. But if the original meaning is 'the edible shoots thereof' (Thphr.), 'the shoots (of other plants)' (Nic.), a connection with Lith. *spùrgas* 'sprout, offshoot', Skt. *sphūrja*-'plant', Av. *sparaga* 'sprout (at the point of an arrow)' is possible. The basic form **spṛħg* which the latter forms would suggest would have given Gr. *σπρ $\bar{\alpha}\gamma$ -; ἀσπάραγος would have to be based on **spęrħg*-, but the $\dot{\alpha}$ and the interchange π/ϕ make strange origin more probable all the same. It is of course possible to think of a contamination of non-IE *(ἀ)σπαραγ-/(ἀ)σφαραγ- 'asparagus' and a PIE **spęrħg*-> *σπαραγ- 'sprout, shoot'. However, the *ph* of Sanskrit also remains a difficulty (PIE **sħperħg*-, giving Gr. **ħsperħg*-, Skt. *spħerħg*-?).
- (3) σφαραγέομαι 'to groan with fullness, to be full to be bursting' (οὕθατα ι 440) and 'to burst with noise, crackle, spatter, hiss' (LSJ). This meaning is found in Skt. sphūrjati 'to burst forth, appear; to rumble, roar, thunder'. A root *sperħ2g-/sprħ2g-therefore seems certain. This is conformed to by Lith. spìrgti (*sprħg-) 'hiss (of things fried)', but Lithuanian has other forms in sprógti 'to burst' (*spr-eħ2-g-?) and spragĕti 'to crackle, spatter', which is derived from spragà 'Bresche, Mangel, Zaunlücke, Spalt' and sprāgē 'idem' and (2) 'von einem brennenden Scheit abgesprungener Splitter' (Fraenkel; basic form?). The zero grade is also found in Serb. přžiti 'to roast'. Neither the φ nor the ph of Sanskrit have been explained. The connection with Lat. spargo (which may be *sperħg-) is uncertain. A difficulty is also presented by σπαργάω (E.) 'to be full to bursting, swell, be ripe', which one would not like to separate from the preceding group, but which is difficult to explain by disyllabic root

(cf. Lith. *sprag-*). Perhaps in the case of this emotionally charged, onomatopoeic word allowance must be made for developments that cannot be traced now.

 $\mu\alpha\lambda\alpha\kappa\dot{\alpha}\varsigma$ 'soft' is connected with $\beta\lambda\dot{\alpha}\xi$ 'stolid, stupid', which of course is not semantically imperative (* $m_el\hbar_2k$ -, * $m_l\hbar_2k$ -). OIr. $ml\dot{a}ith$ 'soft, weak' (* $mle\hbar_2$ -ti or * $m_l\hbar_2$ -ti-) suggests a distant connection with the root of 'to grind', Skt. $m_l\dot{n}\dot{a}ti$, Lith. $m\dot{a}lti$, $m\dot{n}ltai$ (pl.) 'meal', MW blawt, OCorn. blot (* $m_l\hbar_2t\dot{\alpha}$ -) 'meal'. Lith. $m\dot{u}lkis$ 'Dummkopf' may go back to the same * $m_l\hbar$ -k-, but Skt. $m\ddot{u}rkh\dot{\alpha}$ - has been secondarily derived from $m\ddot{u}rchati$ 'to be defeated' (kh analogic? cf. AiGr. II 2, p. 93 and 543 f.).

f. Stems with different Apophonic Forms in Greek

κάρα. One finds in Greek two old apophonic forms of the word for 'head', καρασ- in κάρηνα (cf. Skt. śiras $<*\hat{k}_e r\hbar_2$ -es) and κρᾶσ- in κρᾶατος $<*\kappa$ ρᾶσατος <- η -tos, which replaced *κρᾶνός <-n-όs, corresponding to Skt. śirsnás (beside more recent śirṣatás), from * $\hat{k}_e r\hbar_2$ s- and * $\hat{k}_r \hbar_2$ s- respectively. The full grade * $\hat{k}_e r\hbar_2$ -s- in Lat. cerebrum <*cerasrom, unless this goes back to * $\hat{k}_e r\hbar_2$ -es-ro- (cf. Skt. śiras $<*\hat{k}_e r\hbar_2$ -es-), cf. tenebrae p. 229.

On the other hand, the word for 'horn', Skt. śśńngam, Lat. cornu, Goth. haúrn, W. carn does not seem to have had a laryngeal (*ker-n-). It is therefore the question whether κέρας goes back to * $ker\hbar_2s$ and not to * $ker\eta_-s$ instead. In this way κερα(F)ός (Lat. cervus) could be based on * $ker\eta_\mu$ os, but the connection with Russ. koróva, Serb. kräva (there is no reason to assume * $k\bar{o}r\mu\bar{a}$), Lith. kárvė nevertheless points to * $kor\hbar_2\mu$ o-. (The group κορυφή κόρυμβος, however, displays the clear characteristics of a non-IE substratum word.)

δάμνημι, aor. δαμάσαι, perf. δέδμημαι (II.); derivations δμητήρ h.Pos. 5, δμήτειρα δμῆσις (II.; δάμασις Sch. Pi.), ἄδμητος (II.), ἀδάμαστος (I 158), ἀδμής (δ 637 ζ 109. 228). PIE *demħ2-. The present must originally have sounded like *dm-n-eħ2-mi, OIr. damnaid 'festbinden, (Pferde) bändigen'; δαμ- from dm- before n as in κάμνω τάμνω or analogic, cf. Schwyzer, p. 693 n. 1 with Nachtr. The aorist probably stands for *δεμασαι after the present. In this way (παν-)δαμάτωρ (II.) as against Skt. damitár- (< *demħ-, or *domħ-? PIE *demħ- would have given Skt. *dimi-, see p. 000) for *δεμα-, of which Greek has no trace (Lat. domitor with generalized o). The zero grade in Skt. dāntá- (ἄ-δμητος), dāmyati (ām for ā?). Full grade with o in damáyati (*domħ2eieti; Goth. gatamjan) and arim-dama- (*-domħ2o-) 'den Feind bewältigend'; $i\pi\pi$ ό-δαμος (II.) therefore probably for *-δομος, which perhaps was also replaced to avoid homonymy with -δομος from δέμω 'to build' (e.g. οἰκοδόμος). Thus in Greek one has beside δμη- (*dmeħ2- and *dmħ2-) only δαμ(α)-, but a form with original *demħ2- is not demonstrable.

δέμω 'to build'; (ἐ)δέδμητο (Hom.; νεόδματος Pi.) points to a disyllabic root, as does Skt. $d\acute{a}ma$ -, if from * $dom\hbar_2o$ -. Perhaps δέμας represents * $dem\hbar_2$ -s. See Add.

κεράννυμι (κεραίω I 203, κεράω II.) has an older present κίρνημι (Od.), which perhaps stands for *κάρνημι < * $\hat{k}_{\vec{l}}$ -n- $e\hbar_2$ -mi, aor. κεράσ(σ)αι (II.; ἐπι-κρῆσαι η 164, Hp.), perf. κέκρᾶμαι (Sapph., Pi., Ion.-Att.; κεκέρασμαι Arist.), κρᾶθῆναι (Th.)

κερασθήναι (Pl.). Here, then, we can see a tendency to generalize κερασ-. The starting-point was κίρνημι— ἐκέρασα— κέκρūμαι. Derivatives κρᾶσις (A.) as against (κατα-)κέρασις (Arist.), κρᾶτήρ (Il.) karatera Myc. Skt. (ά-)śīrta- corresponds to (ά-)κρᾶτος (Il.).

 $\pi ελάσσαι$, pres. $\pi iλναμαι$ (II.) (for * $\pi αλν$ -?) has the old scheme * p_l -n- $e\hbar_2$ -mi * $pel\hbar_2$ -. The agric $\pi λ$ $\pi λ$

γελάω has an aorist γελάσ(σ)αι (II.), which suggests $*gel\hbar_2$ -. The present will have been *γέλαμι (J. Schmidt, KZ 39.35; not *γελᾶμι with Specht, KZ 63.211-6, cf. Schwyzer, p. 682,3), which is also suggested by Arg. διεγέλα καταγελάμενος. For γέλας etc. see p. 000. In γαλήνη 'stillness (of the sea)' we have $*γαλασ - < *g_el\hbar_2$ -s-, cf. κάρηνα, if it has been derived from this root (cf. also σελήνη). Equally dubious is γλήνη (II.) 'eyeball' (possibly $*g_l\hbar_2$ -).

θνήσκω τέθνηκα — ἔθανον — θνητός all occur in the*Iliad*. Sanskrit has the aorist*ádhvanīt*(**dhuenħ*₂-);*dhvāntá*- (for the*n*cf.*dānta*- s.v. δάμνημι) conforms to <math>θνητός. For ἔθανον < **e-dhuħ*₂*om* see p. 217. The plural of τέθνηκα, τέθνἄμεν, is analogic, see p. 204. Θάνατος goes back to **dhuenħ*₂-, cf. κάματος s.v. κάμνω (p. 201).

ταράσσω. In Homer the aorist ἐτάραξε and the perfect τετρηχυῖα (H 346), ppf. τετρήχει (B 95) occur, which suggests a root *dhreħ₂gh-. The present ταράσσω (Pi.) is denominative or derived from the aorist. However, the aorist cannot be old, since one would in that case expect ϑ and because full grade is normal here (although *dherħ₂ghs- is not a very probable aorist formation). One must therefore assume influence of a noun, e.g. ταραχή (*dherħ₂gh-), although this does not occur until Herodotus. Θράσσω (Pi., Hp.), ϑ ρᾶξαι (A., E.) may therefore be older and be based on *dhreħ₂gh-. The u-stem τρηχύς will be based on zero grade (*dhṛħ₂gh-(e)u-).

πράσσω belongs to a widespread root *per- (in πέρ $\bar{\alpha}$ (ν), πέρι, πείρω) with the suffix $e\hbar_2$. Of this, Greek has two verbs besides πράσσω, or rather one verb of which a specialized meaning acquired separate forms (Chantraine, Gr. Hom., p. 354 with n. 2). These verbs are:

(1) 'to export for sale' πέρνημι (II.; "περάω wrongly inferred from forms like ἐπέρασσα" LSJ), ἐπέρασσα (II.), πέπρᾶκα (Alex.), πέπρᾶμαι ἐπράθην (A.; πεπερημένος Φ 58, a form which one would more readily expect with (2), but Leskien's

conjecture *πεπρημένος is not permissible); on these latter forms πιπράσκομαι (Lys.) was built, and πιπράσκω (Thphr., see LSJ Suppl. s.v. πέρνημι).

- (2) 'to drive right through, traverse, penetrate, pierce' περάω περήσω ἐπέρησα, all II. (πεπέρακα A.).
- (3) 'to pass through, fare (well etc.), achieve' πρήσσω πρήξω ἔπρηξα (all II.), πέπρᾶγα πέπρᾶχα (Hdt.).

The last form has an invariable stem $*pr(e)\hbar_2g$ - (cf. $\pi\rho\tilde{\alpha}\gamma\mu\alpha$). The present must be based on the aorist (Schwyzer, p. 715), $\pi\epsilon\pi\rho\tilde{\alpha}\chi\alpha$ is an innovation for $\pi\epsilon\pi\rho\tilde{\alpha}\gamma\alpha$. The aorist itself may have been derived from a present $*\pi\rho\tilde{\alpha}$ -γ-ω (cf. $\tau\mu\dot{\eta}\gamma\omega$) (beside which the perfect $\pi\epsilon\pi\rho\tilde{\alpha}\gamma\alpha$ therefore stood).

Πέρνημι is an old present that has the ε of ἐπέρασα, for original *πάρνημι < *pṛ-n-eħ₂-mi (or *πίρνημι?); Aeol. πορνάμεν (Hsch.) arose phonetically from this basic form.

The system of περάω is entirely a Greek innovation.

πλήσσω, πλῆξα ἐπέπληγον, πέπληγα, πληγῆναι all in Homer, πλαγῆναι (Hdt., only in compounds). Derivatives are πληγή, Dor. πλᾶγά. Germanic OE flōcan 'to beat', Goth. faiflokun; OCS plakati se 'to be sad' (Lith. plakù plàkti). Greek therefore has a root *pl(e) $\hbar_2 g$ - (πλήσσω is derived from the aorist).

The full grade I (*pelħ2g-) perhaps in πέλαγος, with an original meaning 'flat', cf. OHG flah and Gr. πλάξ πλᾶκός 'anything flat and broad; plain, ocean-plain, flat top of a hill' (cf. OHG fluoh < *plāki 'roche escarpé'). However, the last Greek form is difficult to explain, since *plħ2k- could not become πλᾶκ- (but only *πλᾶκ-). Cf. Lith. plakù plàkti (Lat. plango). One might envisage here a word of non-IE origin, cf. Πλάκος and OIcel. floer (< *plak-es) 'Felsenabsätze'; cf. Frisk, II, p. 350.

Without the enlargement k/g one has Lith. plóju plóti 'platt drücken, breit formen' — rankas 'die Hände breit zusammenschlagen, in die Hände klatschen'.

An n-derivation is found in Lat. plānus, Celt. Medio-lānum (cf. OIr. lár 'ground, soil'); Lith. plónas 'thin', plónė 'cake'. Πέλανος 'cake' may therefore belong with this. Also compare for the meaning πλακόεις πλακοῦς (Ar.) 'flat cake' (πλάξ supra). However, it must be doubted that παλάθη 'cake of preserved fruit' (Hdt.) and πλάθανον 'kneading board or tray' (LSJ Suppl.) belong here; an enlargement dh is not found elsewhere (from this stem; the words create the impression of being of non-IE origin).

Finally, $\pi\alpha\lambda\dot{\alpha}\mu\eta$ may belong to this root, for which Lat. palma, OIr. lám (cf. lár supra) in any case suggest disyllabic root. More difficult is the relation between $\pi\alpha\lambda\alpha\sigma\tau\dot{\eta}$, Lith. plãštaka and OHG flazza (all 'palm of the hand'). Plãštaka is derived from plàkti (supra) as *plakškata.

ἔτλην does not have any old present in Greek; τλάω appears very late (Tz.), the perfect or τολμάω acts as present. Beside ἔτλην, the aorist also has ἐτάλασσα, the perfect is τέτληκα τέτλαμεν τετληώς (all II.). Cf. p. 244.

The old present is probably found in MIr. $tlenaid < *tlināti < *tl-n-e\hbar_2-ti$ (Lat. tollo < *tl-n-?), which would have given *τάλνημι (*τίλνημι?) in Greek. Έτλην

may be an old athematic aorist (* $tle\hbar_2$ -), but ταλάσσαι must have been transformed from τελάσσαι, which Hesychius defines as τολμῆσαι, τλῆναι. The many nominal forms with ταλα- will have been of influence here. The verbal adjective τλητός corresponds to Lat. $l\bar{a}tus < *tl\bar{a}tos$, W. tlawd 'poor', from * $tl\hbar_2$ -tos. Derivatives are, with full grade I τελαμών 'supporting band, base of a stela', and further τλάμων and πολύτλασ; * $tll\hbar_2$ -> ταλα- (ταλαός τάλαρος ταλαεργός ταλάφρων ταλαύρινος ταλασίφρων τάλας, -ἄνος) is very frequent. For τόλμα see p. 240.

κάμνω ἔκαμον κέκμηκα κεκμηώς (Hom.). Skt. śamnīte 'to take pains, labour' suggests an old present * \hat{k} m-n-e \hbar_2 -mi, which would have given *κάμνημι. For * \acute{e} - \acute{k} m \hbar_2 -om > ἔκαμον see p. 217. Το (πολύ-)κμητος (II.) Skt. śāntá- (with analogic n) corresponds; in addition there are ἀκμής (cf. ἄδμητος ἀδμής) and ἀ-κάμας, -αντος ἀκάματος (all Hom.). Κάματος as θάνατος (* \acute{k}_e m \hbar_2 -), see p. 206ff.

g. Words ending in -ac

There is a small group of neuters ending in $-\alpha \zeta$ that go back largely to disyllabic roots. They may be discussed here together.

σέλας (σελαγεῖν) is connected by some with Skt. svargá- 'heaven, celestial', Av. xvarənah- 'gleam, majesty' and Lith. svilti 'to burn without flame'. In that case nothing would suggest disyllabic root (svargá-; for svilti see Fraenkel s.v.: the stress characteristic of intransitive verbs). But the development of su- in Greek is a serious drawback to this connection, see Lejeune, $Trait\acute{e}$, p. 116.

τέρας 'sign, wonder, portent, monster'. Connection with πέλωρ τέλωρ presupposes dissimilation ρ - ρ > λ - ρ .

γέρας 'gift of honour', originally 'old age' (in which meaning it was replaced by γῆρας; cf. γεραιός 'old') is cognate with γραῦς γρηῦς γρηῦς (Γ 386, Od.), which goes back to * $\hat{g}re\hbar_2$ - $i\hat{e}u$ -s * $\hat{g}_r\hbar_2$ - $i\hat{u}$ -os (Kuiper, Notes, p. 51; cf. Schwyzer, p. 574; for $i\hat{u}$ cf. γραιβία ἢ γραιτία (i.e. *γραιβία) πανήγυρις. Ταραντῖνοι Hsch. (i.e. 'γερουσία'). It may be wondered whether γραῖα (α 438; town in Boeotia B 498), instead of being a secondary $i\alpha$ - derivative (certainly not *γρᾶ $_{\rm F}$ - $i\alpha$ with Frisk), is not based on * $gr(e)\hbar_2$ - $iu\hbar_2$ (cf. πρέσβα p. 158). Skt. $j\hat{t}ryati$ ($j\hat{u}ryati$) 'to become defective, old' suggests laryngeal, * $\hat{g}_r\hbar$ -. In that case $j\hat{a}rati$ 'to make, become old' is based on * $\hat{g}er\hbar_2$ -(a conjunctive present), as is $j\hat{a}rant$ -, γέροντ- < * $\hat{g}er\hbar_2$ -ont-. Everything therefore points to γέρασ < * $\hat{g}er\hbar_2$ -s. For Skt. $jar\hat{a}s$ - 'old age' infra.

κρέας is identical with Skt. kravis- (n.) 'raw meat'. The zero grade is probably found in Skt. $kr\bar{u}r\dot{a}$ -, Av. $xr\bar{u}ra$ - 'bloody', $*kru\hbar_2$ -ro-. On the other hand κρυμός 'frost' is better omitted here on account of the meaning (and probably Av. $xr\bar{u}ma$ -'horrible' as well). Κρυερός is in any case not directly from $*kru\hbar_2 ro$ (> *κρυρο-), see p. 247 ff. There is no foundation for a suffix - $\hbar s$ (Frisk *qreu-ss). See below.

For δέμας (* $dem\hbar_2$ -s?) see p. 198 s.v. δέμω (but see Add.!), for κέρας (* $ker\hbar_2$ -/ $ker\mu$ -?) see p. 198.

ἔραμαι ΙΙ., ἐραστός, Aeol. ἐραννός etc. beside ἔρως (ΙΙ.; Aeol. ἔρος) is parallel to *γέλαμι ἀγέλαστος γέλως.

The last two stems suggest a neuter *ἔρας *γέλας beside the masculine ἔρως γέλως, PIE * $gel\hbar_2$ -s: $gel\hbar_2$ - $\bar{o}s$. (The accusative γέλω < * $gel\hbar_2$ - $o\dot{s}$ -m in σ 350 υ 8. 346, with v.l. γέλων, which is more recent, as is γέλον. The stem γελοσ- perhaps in γελοίζος B 215, if not on the analogy of αἰδοῖος.) For -s: - $\bar{o}s$ cf. the frequent -r: - $\bar{o}r$ (-r > - $\alpha\rho$: - $\omega\rho$), τέκμαρ: τέκμωρ, κελαρύζω: κέλωρ, ὐδαρής: ὕδωρ, ῆμαρ: * $am\bar{o}r$ (in Arm. awr) and - $m\eta$: - $m\bar{o}n$ (- $m\eta$ > - $\mu\alpha$: - $\mu\omega\nu$). In a similar fashion Skt. $jar\dot{a}s$ - * $ger\dot{h}_2$ -os- stands against γέρας.

Beside Skt. kraviş- Latin cruor, according to Kuiper, Act. Or. 20 (1958) 23-35, points to an original paradigm $*kreu\hbar_2$ - $\acute{o}s$ $*kreu\hbar_2$ - $\acute{o}s$ -m $*kru\hbar_2s$ - $\acute{o}s$.

In this way one finds in Sanskrit beside ntr. sádhiṣ- a form *sadhás (in sadhásta-), PIE *sedħ-s and *sedħ-es- respectively, which are based on *sed-eħ₁- (in Lat. sedēs) (*sedħ₁ still in OIcel. siot 'seat, abode, home'); see Kuiper ibid. with additional cases.

It seems to me that there is no reason for Benveniste's rejection (*Origines*, p. 31-9) of this explanation of the neuters ending in $-\alpha \zeta$. True, $\kappa \rho \dot{\epsilon} \alpha \zeta - krav \dot{i} \varsigma$ - is the only direct correspondence, but disyllabic root can nevertheless also be convincingly demonstrated for $\gamma \dot{\epsilon} \rho \alpha \zeta$ and * $\gamma \dot{\epsilon} \lambda \alpha \sigma$ * $\xi \rho \alpha \zeta$. His supposition that $-\alpha \zeta$ stands for $-\alpha \rho$ cannot explain the origin of this whole category. Nor can it be seen why the much more frequent group of words ending in $-\alpha \rho$ should have been partly replaced by $-\alpha \zeta$ (cf. Schwyzer, p. 514 n. 6).

As Skt. sadhiş- shows, neuters ending in $-h_1$ -s therefore also existed. One could connect with these the declension with ε of a few words ending in $-\alpha \zeta$. In Homer these are κτέρας, οδδας and κῶας. It is assumed (Schwyzer, p. 515) that the basis here is a phonetic law $\alpha o \alpha \omega > \varepsilon o \varepsilon \omega$. Chantraine, Gr. Hom., p. 210, points to the drawbacks of this assumption: the ε is found only with these three words (in Homer) and then without exception; the forms themselves do not point to the phonetic law mentioned (κτέρεα Ω 38 α 291 β 222 γ 285, -εων ε 311; κώεα Ι 661 Od. 4 times, -εσιν Od.; οὔδεος M 448 ι 242, οὔδει Il. 12 times, οὔδε $\overline{\Psi}$ 283 ι 459, but Ξ 468 can also be read trisyllabically). In Ionic one finds κέρεα γέρεα τέρεα (all on the analogy of κτέρεα?), in Attic such forms of βρέτας κνέφας and σέβας. It is therefore possible that here only the three Homeric words are concerned originally, so that a phonetic development ($\alpha o > \epsilon o$ etc.) or also influence of the type $\gamma \epsilon vo \varsigma$ is improbable, the latter also on account of the dat. οἴδει, which is disyllabic twelve times (as against trisyllabic twice), while the stems ending in -oc have -eï. Unfortunately, none of these words has a reliable etymology. Myc. kowo (with the ideogram SKIN + KO), PY Un 718 (Docs. 283) only presents new difficulties here: acc. kōwon if from an o-stem (cf. ἔρος)? If a stem ending in $-\hbar_1$ -s forms the basis here, the original nominative ending in $-\epsilon c$ would have to have been replaced by -ας, which is conceivable (although one would sooner expect that this was replaced by -o₂). Further I see nothing in favour of the hypothesis. See Add.

2. The Zero Grade $R\bar{\alpha}$

That the zero grade of \bar{a} \bar{e} \bar{o} was not a reduced vowel (∂), but a consonantal element (\hbar), is the heart of the laryngeal theory. The correctness of this view is evidenced by for instance the forms for 'full' from the root *pelo-|plē-: Skt. pūrṇá-, Serb. pũn, Lith. pìlnas, Goth. fulls, W. llawn, for which, if in the zero grade *plo- the ∂ was a vowel, one would after all expect *priṇá-, *plon, *planas, *flans, *llan respectively (Cuny, Rev. Phon. 2.102, cited by Cowgill, p. 144). In this way one does in fact explain — though wrongly — forms like τέτλαμεν (with τλᾶ- < *tlo-), e.g. Lejeune, Traité, p. 178; see for this p. 244. If the representations found go back to ∂ 0 and not to ∂ 0, the ∂ 0 was less sonorous than ∂ 1 (∂ 1) ∂ 2.

Nor are the forms found explicable by $r \partial$ (etc.) if ∂ in this formula is regarded as vowel. The (vocalic) ∂ after all became i in Indo-Iranian, and in all other languages a. In Greek one would therefore expect $r \partial > \alpha \rho \alpha$ (and not $\rho \bar{\alpha}$) with $r > \alpha \rho$ before vowel (although there is little material for this development, Schwyzer, p. 342; Lejeune, $Trait\acute{e}$, p. 167 ff., is even briefer). This development is for instance assumed by Schwyzer (p. 362) when he attempts to explain $\alpha \rho \alpha$ by a transitional form ('etwa $r \partial$ ') of the basic form of $\rho \bar{\alpha}$ ($r \bar{\alpha}$ or \bar{r}) (see for this idea p. 207). In the same way one would expect iri in Indian, ari in Avestan and ara in Latin.

Hirt, *Idg. Ablaut*, p. 58, starts for these forms from a basic form $_era$. However, it cannot be seen how this form was able to become anything else but ara in Greek and Latin. His explanations (p. 64) are unacceptable, since they are arbitrary assumptions, for which no indications are found: either the second vowel disappeared with lengthening of the first $(ara > \bar{a}r)$, followed by metathesis $(\bar{a}r > r\bar{a})$, or the first vowel disappeared with lengthening of the second $(ara > r\bar{a})$. Walde defends this view (*Stand u. Aufg.*, pp. 152-200), because he is of the opinion that Gr. ρω can be explained in this way; however, this explanation seems incorrect to me, see p. 213. The postulation of the development $ara > r\bar{a}$ stems from Schmidt, KZ 23.281, who also compares ἐστόροται: ἔστρωται (see for this p. 229).

Hirt's starting-point is also shared by Kuryłowicz, Etudes, p. 67, who explains Skt. $\bar{i}r$ by $_er\partial$ by assuming that $_e$ became i, and $r\partial$ became $_r$. Apart from the improbability of the latter development, the result ir is very strange, nor can it be seen how this was able to become $\bar{i}r$. His comparison with $\bar{i}rte$, which he interprets as having developed from *i-r-te, is incorrect. The basic form of the 3 sg. * $\hbar i$ - $\hbar r$ -toi was, under the influence of 3 pl. * $\hbar i$ - $\hbar r$ -r-toi > $\bar{i}rate$, replaced by $\bar{i}rte$ (if one may not assume * $\hbar i$ - $\hbar r$ -toi, with consonantal r). For an attempt by Bailey to explain $\bar{i}r$ by a similar form see Kuiper, Die Sprache, 7.15. In Indian nothing else is to be expected for $_er\partial$ than iri, for which see p. 208.

A general drawback is that, if one starts from $_{e}r_{\partial}$, one does not see what the development of $_{r\partial}$ then was. If the existence of the first form is to be expected — and in my opinion is demonstrable too — yet it cannot be denied that stems of the type TeRH had a zero grade TRH.

On the other hand it has been assumed that pa was contracted to \bar{p} back in the proto-language. However, this idea of De Saussure is based solely on the supposed parallelism with $\bar{\imath}$ \bar{u} (from ia ua) as zero grade of disyllabic roots of which the second consonant was i or u ($Te\bar{\imath}a$ $Te\bar{\imath}a$). Apart from this parallelism that can be constructed, there is nothing that suggests a contraction of this kind; it is not demonstrable and the assumption has nothing in its favour, because it does not contribute to the explanation of further development. Brugmann (Grundr., I^2 , 1, p. 418) calls them 'Verlegenheitsansätze'. Moreover, it has appeared above that $i\hbar$ $u\hbar$ at the end of the word was preserved down to the separate languages (p. 155 ff.).

That $r \ni$ was not contracted to \bar{r} is also evident from the compositional shortening (which is dealt with in greater detail on p. 242 ff.). In Indian we find for instance carkṛti- as against kīrti-, ástṛta- as against stīrṇá-. Av. stərəta- : starəta-, Gr. στρατός : στρωτός, corresponds exactly to the latter. It is clear that we are not concerned here with shortening of the historical simplicia, for in that case we would get *-kirtí-, *stirtá-, *στροτός (which does occur, but as the Aeolic development of *strtos); cf. Kuiper, Die Sprache, 7.14-31. If we assume that ro was not contracted, this shortening may be explained as disappearance of the ∂ . If a contracted \bar{r} is taken as starting-point, another explanation remains possible: it may be assumed that \bar{t} was shortened into t. However, this changes if Latin is brought into it. Unfortunately one finds only one case here, cognitus (Kuryłowicz, Etudes, p. 66). This form, which is cognate with $n\bar{o}tus$ (* $\hat{g}no\bar{h}_1tos$) cannot be explained as a shortening of $n\bar{o}tus$, nor by * $\hat{g}natos$ (* $\hat{g}nh_1tos$), which would have given * $gn\bar{a}tus$ (and could not itself become *- $gn\bar{a}tus$ > -gnitus either). Here compositional shortening from *\hat{gnatos} (*\hat{gnh1tos}, *\hat{gntos}), Sommer, p. 605, is not possible, since this would have given *-gntos > *-gentus > *-gintus. The sole surviving possibility, to which my attention was drawn by my friend J. P. Smit, prematurely taken from us by an accident, is loss of \hbar in (Lat.) *gna \hbar tos $(<*\hat{g}_n\hbar_1 tos)$, which therefore gave *gnătus > -gnitus. If this explanation is correct, it proves the existence of a phase $na\hbar$ ($na\partial$). An intermediate phase \bar{n} , with the development $\eta \partial > \bar{\eta} > na\partial > n\bar{a}$, instead of $\eta \partial > na\partial > n\bar{a}$ direct, becomes highly improbable in that case. Consequently there is nothing to support the contracted form \bar{n} , while the compositional shortening rather suggests an uncontracted form nh (etc.) existing down to the individual languages.

The last-mentioned development $n > na > n\bar{a}$, which must be assumed for Latin, Greek and Celtic, itself already points to the consonantal character of the a (\hbar), for a development n > na before vowel would be most surprising.

If it is assumed that $\eta \partial$ was preserved down to the individual languages and that ∂ was a consonantal element $(\eta \hbar)$, the individual developments are more easily understandable than when one starts from $\bar{\eta}$ (etc.).

In Latin, for instance, $r\hbar$ (> $ra\hbar$ > $r\bar{a}$) explains the vocalism; in comparison with r > or one would have more readily expected $\bar{o}r$ (perhaps $r\bar{o}$) from \bar{r} . For the \hbar itself was also vocalized to a in Latin.

Indian $\bar{t}r < r$ would have to be accepted without question, while $\bar{t}r < r\hbar$ becomes

more comprehensible as laryngeal umlaut $(r\hbar > ir\hbar)$, in a language in which \hbar was vocalized to i), followed by compensatory lengthening $(ir\hbar > \bar{t}r)$ (Kuiper, *Die Sprache*, 7.14-6).¹⁰¹

In Latin, where the vocalic sonants developed to or ol em en, a vocalic segment develops after the sonant if it was followed by laryngeal, this segment being coloured to a by the laryngeal.

It is clear that $r\bar{a}$ (etc.) must not be explained by PIE $r_e\hbar$ (as Kurylowicz, Pr. Fil., 11.236, did), since in that case one would have expected $r\bar{a}$ in all languages (e.g. also in Germanic and Baltic), for instance in Indian *jñāta-<* $\hat{g}n_e\hbar to$ - instead of $i\bar{a}t\dot{a}$ <* $\hat{g}n\hbar_1 to$ -. (The form $j\tilde{n}at\dot{a}$ - that occurs stems from * $\hat{g}no\hbar_1 t\dot{o}$ -, Lat. $gn\bar{o}tus$.)

I fail to understand the exposition by Kuryłowicz, Apophonie, p. 197, who explains $T_R^nH-t\acuteo->T_R^nAt\acuteo-$ along the line of $T_R^nHt\acuteo->T_aRH_at\acuteo->T_aRat\acuteo->T_aRat\acuteo->T_aRat\acuteo->T_aRat\acuteo->T_aRat\acuteo->T_aRat\acuteo->T_aRat\acuteo->T_aRat\acuteo->T_aRat\acuteo->T_aRat\acuteo->T_aRato->T_aR$

And yet a difficulty remains here, since one would expect that $ir\hbar$ would give before vowel ir $(ir|\hbar V > i|rV)$, and before consonant ir $(ir\hbar|C > ir|C)$, while the opposite is the case.

3. The reduced Grade $\alpha R\alpha$

Beside $R\bar{\alpha}$, Greek has various forms with $\alpha R\alpha$. In emulation of Van Wijk, IF 20.342, Specht, KZ 59.115 ff., regards the words with $\alpha R\alpha$ as transformations of $\sigma R\alpha$, i.e. $9\dot{\alpha}\nu\alpha\tau\circ\varsigma$ for *9 $\dot{\alpha}\nu\alpha\tau\circ\varsigma$, like $\kappa\dot{\alpha}\lambda\alpha\mu\circ\varsigma$ as against * $\hat{k}ol\hbar_2mos$ (Russ. $sol\dot{\alpha}ma$, Serb. $sl\ddot{\alpha}ma$, OPr. salme, Latv. salms, OHG halm, Lat. culmus; but see the Celtic forms, p. 195). Although this may be correct in an occasional case, it cannot be accepted as an explanation for the origin of this category. Usually a basis for the transformation, such as $\xi \theta \alpha \nu o\nu$ for * $\theta \dot{\alpha}\nu o\nu$, cannot be pointed to, so that only assimilation could be envisaged, which, however, is contradicted by words like $\kappa \dot{\alpha}\lambda\alpha\phi\circ\varsigma$, $\kappa \dot{\alpha}\nu\alpha\beta\circ\varsigma$, $\kappa \dot{\alpha}\nu\alpha\gamma\gamma$, $\kappa \dot{\alpha}\nu\gamma\gamma$, $\kappa \dot{\alpha}\nu\gamma$

Cowgill (p. 150) also assumes, in emulation of Kuryłowicz, Apophonie, p. 206 f., that all forms with $\alpha R\alpha$ are based on transformation from full grade I ($eR\hbar$ or $oR\hbar$). To support his argument he invokes not only the above-mentioned θάνατος but also τέμενος ταμεσίχρως beside τέμαχος. Quite apart from the fact that precisely here no *ταμα- occurs, this case must be viewed quite differently, p. 221 ff.: τεμε- is the phonetic form, τεμα- and ταμε- are due to the influence of other forms. Assimilation in $\epsilon R\alpha$ is improbable, in view of the large number of words with this structure (γέρανος κέλαδος κέραμος πέλαγος πέλανος πέταλον τελαμών τέναγος χέραδος). However, one could point here to βάραθρον, but this seems non-IE, see p. 193. In many cases it cannot be seen from where the α must have been introduced, e.g. in the nominal forms with ταλα-: of *τάλνημι there is no trace. Forms like κάλαμος παλάμη ταραχή σφαραγ- χαράδρα γαλήνη κάρηνα cannot be regarded as analogic either. Cowgill's point of view in this matter is probably a consequence of the fact that he does not accept the reduced vowel (ϵ), as a result of which the only alternative ($\epsilon R\hbar$) becomes unacceptable for him.

Kuryłowicz, Apophonie, p. 198 f., also does not assume that $\alpha R\alpha$ is a phonetic development, but explains the forms by means of analogy. On a basis of the relation TeR(T):TaR(T) (<TR(T)) he believes that $TeRa:TR\bar{a}$ ($<TeR\hbar_2:TR\hbar_2$) was replaced by TeRa:TaRa. This is conceivable in itself, but it implies that the whole category is secondary, which is not probable in particular with the words of which the full grade TeRa is not demonstrable (see the words just listed). Another major drawback is that the forms with TeR(T):TaR(T) are not frequent (δέρω σπείρω: δαρτός σπαρτός) and that here aR itself is probably analogic for Ra (δρατός). (It may be noted that Kuryłowicz has built up a strange system: he claims that $TR\bar{a}$ developed from $TRHT > T_aRH_aT > T_aRa(T)$, which would have been more likely to have given TaRa, whilst the TaRa that is in fact found is in his opinion analogic for $TR\bar{a}$. The whole of this is not very probable.)

Viewed from Greek, it is improbable that the whole category $\alpha R\alpha$ is analogic, since the forms are widely represented in the oldest linguistic stage and there is no basis for a complete transformation.

It has been attempted to trace aRa back to the same basic form as $R\bar{a}$. As the

opposition θάνατος: θνητός shows that the phonetic structure cannot have determined the difference in development, it has been endeavoured to make the stress responsible for it. For instance, Per Slomann (ap. Pedersen, Cinq. décl., p. 33) thought that aRa was the normal development after the stress, explaining θάνατος by *ἄθανατος. But ἀθάνατος, as a bahuvrihi, is secondary to θάνατος. In general it is improbable that the category as such developed in this way, for the group aRa usually forms the first two syllables of the word. It is not probable that the group came into being entirely in composition, which would then have to be assumed, since it cannot be seen in which compounds the above-mentioned words (in particular $\gamma \alpha \lambda \dot{\eta} \nu \eta \kappa \dot{\alpha} \rho \eta \nu \alpha$) could be used.

As many of these words have the stress on the group aRa, it has been assumed that aRa came into being when this group had the stress. However, it is improbable that this group was originally stressed in PIE, precisely because it had reduced vocalism. In that case one must assume a shift in stress (Hirt, IF 7.209, Idg. Ablaut, p. 67, Idg. Gr., 2, p. 136 f.). Such a shift is suggested by OHG mord, OIcel. mord, which in the first instance must go back to *mfto-, while Skt. mftam has doubtless preserved the old stress. Hirt here assumes a basic form $_eRo$. As discussed above, there is, however, no other development than aRa to be expected for this form, while the forms of the type $R\bar{a}$ cannot be explained by it. If we assume $_eRo$ beside Ro (for $R\bar{a}$), then the hypothesis of the shift in stress is superfluous. However, it is possible to use this hypothesis, starting from the basic form Ro. Here there are two possibilities.

If we assume that ∂ in $R\partial$ is vocalic, $R\bar{a}$ cannot be explained by it, as has been demonstrated above. In fact, in that case we therefore need two basic forms, Ro $(R\hbar)$ and $R\partial$ $(R\hbar)$. If the ∂ was vocalic, $R\partial$ could not have become anything but aRa. However, it must be asked what reality this symbol $(R\partial)$ represents in that case. We can accept the occurrence of a vocalic sonant before a vowel without further discussion. However, in the group Ro the o could be consonantal (o) — for only in that way can the representation $R\bar{a}$ be explained — and it is improbable that if this a was vocalic the preceding sonant could also be vocalic (if $2/\partial$ is replaced by \hbar/\hbar this therefore means to say that Rh is improbable). If the sonant had a consonantal function (Rh), then nothing but Ră would be expected. In this case we are therefore compelled to assume a vocalic element before the R ($_eR\hbar = \text{Hirt's }_eR\partial$). Schwyzer (p. 362) tries to start for aRa from an intermediate form in the development of the zero grade (which he designates by Ra) and the contracted form (\overline{R}) , from which the forms $R\overline{a}$ arose. He claims that this intermediate form then acquired a development of its own through secondary stress. For this intermediate phase he envisages Ro. However, it cannot be seen what real difference could exist between Ro and Ra (apart from the timbre of the reduced vowel (a: a), which, however, is unimportant here). Moreover, it has been demonstrated above that a development $R > \bar{R}$ has not taken place.

If, on the other hand, it is assumed that the ∂ was consonantal ($\partial = \hbar$), then, as we have seen, $R\hbar$ gave the forms $R\bar{a}$. Here it might be postulated that $R\hbar$ (i.e. with secondary stress) became $R\hbar$. However, this presupposes firstly the shift in stress,

secondly that this led to the development stated, which cannot otherwise be made probable. Only the forms $\tau\alpha\rho\alpha\chi\dot{\eta}$, $\mu\alpha\lambda\alpha\kappa\dot{o}\zeta$ and $\tau\alpha\lambda\alpha\dot{o}\zeta$ could be mentioned in order to demonstrate that the stress did not always fall on *ara*. The forms to be discussed below, however, suggest that the stress was not the decisive factor.

The most obvious solution — as already indicated above — is to assume for these forms a separate reduced grade $eR\hbar$, in which e is a reduced vowel, which came into being in the proto-language through weakening of the full vowel e; see for this Introduction, p. 11.¹⁰²

Corresponding forms are found in Indian (Kuiper, $Act.\ Or.\ 20$). Beside $t\'amisr\~a$ <*tem\(\hat{h}sr\)- a form timir'a- occurs, which cannot be otherwise explained than by * $t_em\hbar$ -r'o-, with $_e > i$ through umlaut of the laryngeal (* $tm\hbar$ r\'o- would have given * $t\bar{a}r\'a$ -). Of $s\'am\~a$ 'endeavour, effort, $\kappa\'a\mu\alpha\tau\sigma\varsigma$ ' an instrumental $s\'ami\~a$ occurs, which stems from an original declension * $k\'em\hbar_2$ - $i\hbar_2$ * $k\'em\hbar_2$ - $i\hbar_2$ -s (instr. * $k\'em\hbar_2$ - $i\'e\hbar_2$ - \hbar_1 ?); thus s'ama- <* $k\'em\hbar_2$ -o-. In this way sim'a- 'self' will go back to * $s\'em\hbar$ -o-, like $\'a\mu\sigma$ - and Goth. sums; the laryngeal is also suggested by sam'a-, which beside 'am 'am-'am- must go back to *s'am'am- (*s'amo-). The laryngeal is probably found again in 'am'am0; the great age of this form is evidenced by its widespread appearance, Lat. s'amilis, Germ. e.g. Goth. s'amle, Celt. e.g. OIr. s'amlith 'simul', s'amail 'resemblance', W. hafal 'similis'. Compare the identical structure of μ e γ a λ o- <*meg'am'am0-, Goth. mikils.

These Indian forms with im(i) can only be explained by $_em\hbar$. We therefore find in this the Indian parallel of Gr. Lat. Celt. ara. From $sim\acute{a}$ - $(sam\acute{a}$ -), $\mathring{a}μ\acute{a}$ - $\mathring{a}μ\acute{a}$ ($\mathring{a}μ\acute{a}$) $\mathring{a}μ\acute{a}$ - $\mathring{a}μ\acute{a}$ ($\mathring{a}μ\acute{a}$) $\mathring{a}μ\acute{a}$ - $\mathring{a}μ\acute{a}$ ($\mathring{a}μ\acute{a}$), $\mathring{a}μ\acute{a}$ - \mathring{a}

The form with reduced vowel reconstructed for the proto-language could be irrefutably demonstrated in forms in which the second consonant is an occlusive.

This too is included by Schwyzer, although it is not clear exactly how he does so: "in andern Fällen ist die Doppelheit einfach zur Kenntnis zu nehmen (wie der Unterschied von Reduktionsund Schwundstufe in andern Fällen)."

¹⁰³ It is therefore possible that Gr. ἄμα is based on $*s_em\hbar_2$, which would explain the ending; cf. p. 153f. Cf. Cret. ἄμακις, Tarent. ἄματις. In this connection ἀνά may also be discussed. To ἀνά Lat. an-, Arm. am- correspond. Avestan has ana, OP anā; it is uncertain whether Skt. ā belongs here. The Balto-Slavic $*n\bar{o}$ (OCS $n\bar{a}$, Lith. $nu\bar{o}$) is reminiscent of ἄνω. The comparison of the last two forms suggests $*\hbar_2n\bar{o}$ ($\hbar_2no\hbar$). Comparing the form ἄμα, a basic form $*\hbar_2en\hbar_2$ seems most obvious (in my opinion $*\hbar_2en\hbar_2$ would have become $*\dot{a}v\bar{a}$). However, it is not necessary to assume that the word began with laryngeal: $*en\bar{o}$ ($*eno\hbar$), $*en\hbar_2$ are equally possible. A problem is also presented by Aeol. ὄv. (Ruijgh, Etudes, p. 353 f., who believes that he can point to both ano and ana in Mycenaean, suggests ŏv by apocope from *ŏvo, which developed by assimilation from anŏ, while for anŏ beside ana ἀνά he compares Myc. parŏ (πάρο Alc.) beside $\pi\alpha\rho\dot{a}$.) The whole analysis remains uncertain.

However, such forms are very scarce. It is uncertain whether $\pi\alpha$ τάνη has been derived from *petħ₂- (πετάννυμι). But the connection with Lat. pateo cannot be denied. For this no other basic form can be reconstructed than * p_e tħ₂-.

One may also think here of W. adain 'wing' < *atani; but the related OIr. én, W. edn 'bird' does not seem to suggest laryngeal (*petnos). Neither Hamp's explanation, Evidence, p. 231, of the second a, nor Kurylowicz's explanation (Apophonie, p. 176) of the first seems probable to me: that with these disyllabic roots after the coincidence of full and zero grade (ReH and RH) a new zero grade $R\tilde{a}$ was introduced after the type $\sigma\tau\eta$ -/ $\sigma\tau\tilde{a}$ - (i.e. in this way $\rho\eta\gamma$ -/ $\rho\eta\gamma$ -) is understandable, but not that the zero grade P (e.g. *pt) of P (*pet-) was replaced by P (*pat-). The word P (*pat-) was replaced by P (*pat-). The word P (*pat-) was replaced by P (*pat-). P (*pat-) was replaced by P (*pat-). P (*pat-) was replaced by P (*pat-).

I fail to understand Vey's thesis that αλα etc. aspirated preceding voiced occlusive (BSL 51 (1955) 80-100). The group αλα does not, according to him, go back to °lo, "mais sur *lo (comme d'ailleurs on l'a parfois noté), c'est-à-dire h*lho" (p. 83). That some noted the reduced vowel as a has of course nothing to do with Vey's halp. What this designates is not clearly stated: only that the first α is not a reduced vowel, "c'est toujours un α, c.-à.-d. la même voyelle que celle qui suit". I fail to understand what this means. On theoretical grounds I do not see the slightest reason to assume aspiration here and I do not find it in the material. As he himself states (p. 94), one would also expect this aspiration with voiced occlusive (immediately) followed by ∂ , but he states that no case is known of the type *teg- ∂ -. In my opinion μεγα-(μεγαλο-), which he himself cites in another context (p. 95 n. 1), conforms to this. Greek has no trace here of *μεχ-, which would correspond to Skt. mahi. Vey tries to explain θυγάτηρ by starting from *dhugh-ə-ter-, assuming that here the (original!) aspiration before a was lost. This is a purely arbitrary assumption and in conflict with what may be reasonably expected. It is not clear why *dhughatēr did not become *τυχατηρ in accordance with the well-known rules. One must therefore start from *dhug-ə-tēr, from which one would, however, equally well expect *τυχάτηρ in accordance with Vey's rule. Nor is it clear why the aspiration does not occur after voiceless occlusive. His theory is based on δαλάγχαν as against θάλασσα (of which therefore the ϑ is said to be due to the origin of the group $\alpha\lambda\alpha$). However, for this an unknown form of breath dissimilation must be assumed (for one would expect *ταλάγχαν), while the 'nasal parasite' remains unexplained: the semantically highly dubious connection with δολιχός ἐνδελεχής, which is linked with MP drang < *dlongo- etc. does not solve this problem. The interchange δ/θ points to non-IE origin. Vey further gives φάραγξ : βάραθρον, χάλαζα : gelidus, γελανδρόν ψυχρόν Hsch. (* gel_{2} -) and χαλαρός: γελαρής (* gel_{2} -!; to explain γαλήνη a following phonetic law is formulated). The last two are semantically very weak. The article consists of a string of improbabilities which need not all be explained here; cf. the criticism by Cowgill, pp. 173 f.

B. DISYLLABIC ROOTS WITH \hbar_3 AND \hbar_1

The question has arisen whether the colour of the laryngeals of the disyllabic roots with \hbar_1 and \hbar_3 has been preserved in Greek. This is the key problem of the following sections. Each of the separate developments will be investigated for these roots. It goes without saying that the forms with \hbar_1 and \hbar_3 are completely parallel.

1. ρω as Zero Grade

Since it has been generally accepted that $\rho\bar{\alpha}$ was able to come into being in the zero grade of disyllabic roots, the question whether $\rho\omega$ could also occur here has been answered in different ways. Firstly it is stated that $\rho\omega$ never goes back to zero grade, but is always based on a full grade (a). A second view is that the original form was a zero grade, but that the phonetic representative $\rho\bar{\alpha}$ was analogically replaced by $\rho\omega$ (b). Finally $\rho\omega$ is interpreted as a phonetic development of a zero grade, explained without (c) or with the aid of the laryngeal theory (d).

It is illuminating to examine the discussion on this matter. De Saussure, Mémoire, p. 263, regarded $\rho\omega$ as the (only) phonetic representation of \bar{r} . Brugmann, Grundr., I^2 , 1, p. 418, wondered whether $\rho\bar{\alpha}$ could not also act as such. Hirt, *Idg. Gr.*, 2, p. 133 regarded $\rho\bar{\alpha}$ as regular and rejected the view that $\rho\omega$ could be the result of a phonetic development, while Walde (infra) tried to explain both phonetically and Schwyzer (pp. 361 f.) finally was prepared to accept $\rho\bar{\alpha}$ as well as $\rho\omega$ and $\rho\eta$. His starting-point displays similarity to the laryngeal theory to the extent that it accepts three separate reduced elements of \bar{a} \bar{e} \bar{o} (noted \underline{a} \underline{e} \underline{o} respectively) which, combined with sonant $(ra\ re\ ro\ or\ era\ etc.)$ gave $\rho\bar{\alpha}\ \rho\eta\ \rho\omega$ respectively; however it differs from the laryngeal theory insofar as these elements are regarded as pure vowels. However, in addition Schwyzer assumes that the three forms rq re rq were able to coincide in \bar{r} , giving $\rho\omega$. In emulation of Lommel, KZ 59.193-204, he speaks of 'offene' and 'geschlossene Tiefstufenformen', but these are names that give no explanation; Lommel expressly states that he is not able to indicate when the one and when the other development took place. It is difficult to see what the factor can have been that caused the loss of the difference in timbre. The facts adduced by Schwyzer as a basis of $\rho\omega$ otherwise than from ro (ζέρεθρον: βρω- and *στερέσαι: στρωτός) seem inadequate for the second part of his thesis ($r\bar{q}$ re $r\bar{p}$ may all merge into $\bar{r} > p\omega$).

Two conclusions impose themselves when one considers the development of this discussion. Firstly, there seem to be good reasons for regarding $\rho\omega$ as the regular representation of a zero grade. Secondly, the reason why $\rho\omega$ (and $\rho\eta$) is not accepted will be the fact that the occurrence side by side of these forms cannot be explained otherwise than by assuming that the reduced elements of \bar{a} \bar{e} \bar{o} were different and that these remained separate in Greek. However, this idea is almost universally rejected,

even by most defenders of the laryngeal theory, which after all presupposes the existence of such separate elements in a phase of the proto-language.

We shall discuss the four interpretations of $\rho\omega$ stated above in what follows.

a. pw Full Grade only

If it is not accepted that for instance $\sigma\tau\rho\omega\tau\delta\varsigma$ goes back to a zero grade $(st\bar{r}t\delta s, *strat\delta s, *strat\delta s, *strat\delta s)$, it may be presumed that the ω goes back to PIE \bar{o} (e.g. Lejeune, Traité, p. 170). As a full grade $(e\hbar_3)$ or an o-vocalism $(o\hbar)$ is unusual here, this \bar{o} would have to be due to analogy in the proto-language. For one cannot invoke $\gamma\nu\omega\tau\delta\varsigma$, of which the stem $*\hat{g}n\bar{o}$ - $(*\hat{g}no\hbar_1$ -) was already generalized in the proto-language with a special meaning to distinguish it from $*\hat{g}en\hbar_1$ - $/\hat{g}ne\hbar_1$ - $(*\hat{g}n\bar{e}$ -). Here the cognate forms $(j\tilde{n}at\delta -, n\bar{o}tus)$ thus show full grade. But there is no indication that this took place otherwise than in some special cases (for $*pl\bar{e}$ - see p. 219).

The verbal adjective ending in -tos, like that ending in -nos, everywhere has zero grade, and subject to evidence to the contrary that this form has been replaced in incidental cases by another apophonic form, one should start from it.

That we have zero grade here is shown by the forms that have parallels in the other languages:

Kuryłowicz, Apophonie, p. 207 f., regards $TR\bar{o}$ as "une donnée primaire, d'autant plus qu'il y a au moins un exemple de $TR\bar{o}$ indépendant de l'existence de ToR(o): βιβρώσκω". It is clear that this one example (which moreover would give an argument e silentio) is not enough to prove this proposition, but is on the contrary the exception to the rule and may not be used as starting-point for an argumentation. It will be demonstrated below that we are concerned here with a normal disyllabic root (p. 234).

An old zero grade in στρωτός is also suggested by στρωτός, Aeol. στροτός, which can only be explained as compositional shortening of *strħtos to *strtos (p. 204., p. 242 ff.).

¹⁰⁴ The name Θεόπρωτος supports the interpretation of Θεσπρωτοί. For 9εσ-v. Frisk s.v. 9έσκε-λος, 9εσπέσιος, 9έσφατος and 9εός.

b. Zero Grade ρω analogic for ρā

If it is accepted that $\rho\omega$ stands in the place of an old zero grade, it is usually assumed that the form $\rho\omega$ has developed by analogy within Greek, and replaces the original $\rho\bar{\alpha}$.

Kuryłowicz, Apophonie, p. 208, considers the creation of $TR\bar{o}$ on a basis of $TeR\hbar$: $TR\bar{a} = ToR\hbar$: x out of the question. However, as $TR\bar{a}$ is a Greek development, one should start from TeRa: $TR\bar{a} = ToRa$ (ToRo): x, which in fact cannot have been a basis for $TR\bar{o}$. More probable is TaR(a): $TR\bar{a} = ToR(o)$: x (possibly TeRa: $TR\bar{a} = TeRo$: x), with $x = TR\bar{o}$. But the following objections may be adduced to this: firstly the forms with ToR(o) are less frequent than those with $TR\bar{o}$ (while TeRo is entirely absent from historical Greek), secondly the forms with ToR(o) can be explained only with the aid of the laryngeal theory, i.e. with the same hypothesis as that which explains $TR\bar{o}$ as a regular development of a zero grade, and finally (if one rejects $TR\bar{o}$ as regular development) one must make allowance for the existing system in which the zero grade was $TR\bar{a}$.

Cowgill (p. 148) also makes the last mistake, assuming that $TR\bar{o}$ (full grade)/TaR-Vwas replaced by $TR\bar{o}/ToR-V$ on the analogy of $TR\bar{a}/TaR-V$, thus for instance $\tau\rho\omega$ -/ *ταρ- replaced by τρω-/τορ- on the analogy of κμα-/καμ-). For, according to Cowgill, the original system was $TRe\hbar_3/TR\hbar_3-C/TR\hbar_3-V>TR\bar{o}/TR\bar{a}-C/TaR-V$ ($\tau\rho\omega$ -/ $\tau\rho\bar{\alpha}$ -/ ταρ-). It is not very probable that this was replaced by $TR\bar{o}/TR\bar{o}/ToR-V$ on the analogy of TRā/TRā/Tar-V, especially in view of the low frequency of the full grade forms ($TRe\hbar_3 > TR\bar{o}$), which would have been the only starting-point for o-vocalism. On the other hand, precisely the zero grade forms have a considerable influence. An important parallel is offered here by Latin, in which the zero grade was certainly TRā (strātus). Latin even gives a more favourable basis for the development postulated by Cowgill, because there TRH-V would have given ToR-V with the normal development r > or. For Cowgill disclaims the influence of the laryngeal on the vocalism of the preceding syllable in Greek and will therefore do the same for Latin (in my opinion TRH-V gives TaR-V in Latin through laryngeal umlaut). Moreover, the original nasal present *str-n- (cf. Gr. θάρνυμαι, p. 232) would have become *storn- in Latin. But, despite the original $TR\bar{o}/TR\bar{a}/ToR$, Latin does not have a single form with $TR\bar{o}$, e.g. tollo tuli but (t) lātus, not *lōtus. On the other hand, it proves that $TR\bar{a}$ of the zero grade has been extended, e.g. perf. strāvi.

However, apart from this detailed criticism, such extensive analogy is not very plausible. If, as is the case here, a simple explanation is possible that is both morphologically and phonetically satisfactory, this is to be preferred to a dubious series of analogic replacements.

It cannot be denied that the stem form with ω was secondarily extended. For instance this happened with βιβρωσκω, of which only forms with βρωσκω. However, the question is from where these forms have spread. The aorist Arm. eker, Skt. garat ($<*e'-g''erh_3-et$), Skt. gārīt (an s-aorist with analogically lengthened a), the perfect Skt. jagāra ($<*g''e-g''orh_3-e$; phonetically this would have given — in the 3 sg. — *jagara, but jagāra can easily be explained by analogy), do not suggest a

form $*g^u re\hbar_3/o\hbar_3$ - (although in my opinion the old aorist was $*\acute{e}$ - $g^u re\hbar_3$ - $/g^u r\hbar_3$ -, see p. 226 f.). It is therefore most likely that $\beta\rho\omega$ - stems from the zero grade (before consonant).

c. Zero Grade po explained without the Aid of the Laryngeal Theory

That $\rho\omega$ was a phonetic development parallel to $\rho\bar{\alpha}$ was defended by Walde, Stand u. Aufg., pp. 152-200. He explained $\rho \bar{\alpha}$ from $e^{r\partial}$, with a development $e^{r\partial} > a^{ra} > r\bar{a}$. In addition he assumed for the apophonic form ToR_{∂} a separate weak phase $_{o}r_{\partial}$, in which o is an o-coloured reduced vowel. It is an unessential point that he assumed that one ome became and ama, i.e. became identical with the development of ene eme (evidently on account of the absence of $v\omega \mu\omega$; see for this p. 214 f.). In addition $_{o}r_{o}$ is said to have given $_{o}r_{o} > r_{o}$. Even if one is prepared to accept that $_{o}r_{o}$ became $_{o}r_{o}$, i.e. that ∂ , which — according to Walde — in itself could only become a, was coloured by the o to o (the converse, in laryngealistic terms $e^{r\hbar_3} > oro$, seems more probable), the difficulty remains of the transition $_{o}ro > r\bar{o}$ (the same as that with $_{a}ra > r\bar{a}$; cf. p. 203), for which there is no parallel in IE. But more fundamental is the question of the existence of a separate o-coloured reduced vowel, of which there is insufficient indication, in my opinion (Kuryłowicz, who assumes $_{q}ra > r\bar{a}$, also denies its existence, Apophonie, p. 207). Moreover, this presupposes the form ToR∂ as starting-point, where it is not clear when TeRa and when ToRa functioned as basis: these two forms are after all apophonic forms which can occur with every disyllabic basis (unless one is prepared to assume a non-apophonic o here, for which see p. 139 f.). Thus the theory fails in one of the clearest cases, στρωτός, which is the zero grade of *stera, not of *stora, as Walde admits (p. 166).

d. Zero Grade ρω explained by the Laryngeal Theory

The explanation that the laryngeal theory gives of $\rho\omega$ is a simple one. Just as $\rho\bar{\alpha}$ was explained as $r\hbar_2 > ra\hbar_2 > r\bar{a}$, one has here $r\hbar_3 > ro\hbar_3 > r\bar{o}$ (both developments only before consonant). This therefore presupposes that the vowel which developed between sonant and laryngeal was coloured by the laryngeal, namely in accordance with the original 'colour' that the laryngeal had in the proto-language. The preceding chapters have demonstrated that this original distinction was preserved down to Greek. There are various indications of such an influence of the laryngeal. In the proto-language it coloured the full vowel e to a or o ($e\hbar_2 > a\hbar_2 > \bar{a}$ and $\hbar_2 e > \hbar_2 a > a$). But in the individual languages too such an influence can be pointed to (but not on full vowel, since this had already been coloured in the proto-language and the laryngeals did not again appear before or after full vowel e). For Indian reference has already been made to the umlaut (!) in $r\hbar > ir\hbar > ir$ before consonant, and $em\hbar > im(i)$; here the laryngeal itself was vocalized to i. In Latin rah from rh as against or < rand $na\hbar < n\hbar$ as against en < n must be ascribed to the influence of the laryngeal $(\hbar > a)$. In Greek one could admittedly identify $\rho \bar{\alpha}$, rah from rh with $\rho \alpha < r$, but there are two points against this. Firstly, $na\hbar < n\hbar$ differs from $\alpha < n$, although here

the influence of the laryngeal is not a matter of colouring. Secondly, there are the Aeolic and Arcado-Cypriot forms (Lejeune, $Trait\acute{e}$, p. 168, Schwyzer, p. 341). Here one would expect $\rho\omega < r\hbar_2$ beside $\rho\sigma < r$, instead of $\rho\bar{a}$, if the laryngeal exerted no influence on the colour of the vowel. However, there is no evidence of this (one finds in Sappho $\kappa\rho\tilde{\alpha}\sigma\iota\varsigma$ $\pi\lambda\tilde{\alpha}\sigma\iota\sigma\upsilon$ $\tau\lambda\tilde{\alpha}\sigma\iota\sigma\iota$). It is therefore to be expected a priori that in a language where \hbar_3 was vocalized to σ , in contrast with $\hbar_2 > \sigma$, $r\hbar_3$ became $r\sigma\hbar$, as against $r\hbar_2 > ra\hbar$, since the σ -colouring effect of \hbar_2 can be demonstrated.

Having arrived at this point, one finds an excellent confirmation of the explanation defended here in an entirely different field. For \bar{m} \bar{u} $\mu\bar{u}$ $\nu\bar{u}$ were assumed of old as the only representation (e.g. Brugmann, Grundr., I², 1, pp. 417-23), beside $\bar{r} \not l > \rho \omega \lambda \omega$. This combination is improbable. It has been found that $\eta h_2 \eta h_2$ were treated in the same way as $r\hbar_2 l\hbar_2$ ($\rho\bar{\alpha} \lambda\bar{\alpha} \mu\bar{\alpha} \nu\bar{\alpha}$), despite the difference $r > \alpha\rho/\rho\alpha : m > \alpha$. In this way one finds in Latin complete parallelism of the nasals and the liquids (in the narrower sense): $r\bar{a} l\bar{a} m\bar{a} n\bar{a}$, despite r > or as against m > em. The same thing is found in Celtic, $n\bar{a}$ (Gaul. Cintu-gnātus) beside $l\bar{a}$, despite r > ri, ar/ra as against m > em, am. (In Indian such parallelism does not exist, $\bar{i}r : \bar{a}$, but here the development of $r\hbar$ is quite different too.) One may therefore expect $\mu\omega$ vw in Greek for $m\hbar_3$ $n\hbar_3$, but no example of this is found in the disyllabic roots. However, the development of νω is demonstrable in the negative adjectives with (να- νη-) νω- p. 98 ff. The confirmation is all the more convincing, since there can be no question here of analogy within a verbal system. There can be no doubt about the original form of these adjectives, p followed by consonantal laryngeal. However, analogy does continue to be possible in the individual cases, e.g. for νώνυμος, which, on the analogy of νωfrom words that began with o- $< \hbar_3$ -, may be derived from ŏvoµ α (or — less probably — on the basis of ἀνώνυμος with ἀν- followed by compositional lengthening). However, it does not seem probable that the whole category vw- (and $v\eta$ - = $n\bar{e}$ -) came into being on the analogy of $v\bar{\alpha}$ - from words with $\dot{\alpha}$ - $<\hbar_2$ -. Words like Myc. noperea2 ('nopheleha', ἀνωφελής) νωχελία νωλεμές and ? νωδός do create the impression of being old and of going back to $n-\hbar_3C$; see the relevant section.

The correspondence between these two forms, $\rho\omega$ $\lambda\omega$ and $\nu\omega$, reduces the chance that we are concerned here with two entirely different forms of analogy that would have led to the same result.

Cowgill based his refutation of this view (p. 149) on W. Gr., Boeot. $\pi\rho\tilde{\alpha}\tau\sigma\varsigma$ as against Ion.-Att., Arc.-Cypr., Lesb. $\pi\rho\tilde{\omega}\tau\sigma\varsigma$, Thess. $\pi\rho\tilde{\omega}\tau\sigma\varsigma$. On the strength of Skt. $p\bar{u}rv\dot{a}$ - and Lith. $p\bar{i}rmas$ (Lat. $prandium < *pr\bar{a}m$ -ed-iom, with $*pr\bar{a}m$ - $< *pr\bar{b}m$ -, is uncertain) he posits as the original form $*p_r\bar{h}_3tos$ and assumes that $\pi\rho\tilde{\omega}\tau\sigma\varsigma$ has been transformed after $\pi\rho\dot{o}$, $\pi\rho\dot{\omega}\tau\rho\varsigma$. This interpretation is not imperative. Firstly, it is not certain that we have a \hbar_3 here, secondly the basic form $*p_r\bar{h}tos$ is not certain. If, starting from a basic form $*p_r\bar{h}tos$, one concludes \hbar_3 on the strength of $\pi\rho\tilde{\omega}\tau\sigma\varsigma$, one therefore assumes a development $r\bar{h}_3 > \rho\omega$; however, this is just what Cowgill tries to refute. If it is assumed that $\pi\rho\tilde{\omega}\tau\sigma\varsigma$ is the phonetic continuation of $*p_r\bar{h}tos$, *proto and *poroto and *poroto both proper names, is not sufficiently reliable.

there is no reason to assume \hbar_3 and not \hbar_2 . If the connection with $\pi\rho\delta$ is correct, this in no way ensures \hbar_3 ; Gr. $\pi\alpha\rho\delta\varsigma$, Skt. purás has in my opinion either no laryngeal $(*p_er\delta s)$ or \hbar_2 $(*p_r\hbar_2\delta s)$, since $*p_r\hbar_3\delta s$ would have given $*\pi\sigma\rho\sigma\varsigma$ in Greek (see p. 000). The full grade forms Skt. prātár-, Osc. pruter $< *pr\bar{\delta}ter$ may have had o-vocalism $(*pro\hbar_2ter)$, not necessarily $*pre\hbar_3ter$).

However, a basic form *pṛħtos is not certain; the form is more likely to have resulted from a contraction (cf. Schwyzer, p. 595). The obvious *προατος would, however, likewise have given ω in Doric; cf. Lejeune, Traité, p. 236 with n. 1 (without any proof being adduced); Buck, Gr. Diall., p. 42.106 As oā can give Dor. ā, but in Attic remains on (or possibly becomes η; Epidaur. Πραράτιος: Att. Προηρόσια, Πληρόσια), only the possibility of a group āo remains; Lejeune, Traité, p. 235. Lejeune, op. cit., p. 236 n. 1, considers *πρᾶγο-τος, in which *πρᾶγο- would correspond to Skt. pūrvá-. However, in that case one would still expect traces of the uncontracted form. Finally, one could also consider Doric metathesis *πρωατος > *προᾶτος, but this remains a hypothesis.

The form Dor. πρώαν (Att. πρώην) does not allow of any conclusion regarding πρᾶτος. This form is found in Theocritus, viz. 5.14 πρώαν with short first vowel; 4.60 πρώαν/πρόαν/πρᾶν, metrically \sim -; 15.15 πρόαν; 2.115 πρᾶν. If this form should go back to * $pr\hbar_3$ μο- (Skt. $p\bar{u}rv\dot{a}$ -), then $r\hbar_3 > \rho\omega$ would appear for Doric. However, this is not certain in view of OHG fruoi — πρώιος, OHG fruo — πρωί, which points to * $pr\bar{o}\mu$ i- (for which * $pro\bar{h}\mu$ i- is possible, if a laryngeal must be assumed). Moreover it does not show ωα > $o\bar{a} > \bar{a}$, but only ωα > $o\bar{a} > \bar{a}$, and that at a late date.

At present it is impossible to obtain certainty regarding these forms, but, as demonstrated, the word cannot be used as an argument against the development $r\hbar_3 > \rho \omega$. Finally, consideration might also be given to dialectal development $r\hbar_3 > \rho \bar{\alpha}$; cf. $i\alpha\rho\delta\varsigma$: $i\epsilon\rho\delta\varsigma$ and see p. 258 ff.

Another word that has been brought to the fore in this discussion is βλωθρός. The word occurs twice in Homer, N 390 = Π 483 (identical passages N 389-93 = Π 482-6) πίτυς βλωθρή and ω 234 βλωθρὴν ὄγχνην. The best connection within Greek seems to be that with βλωστάνω if the latter has a stem βλωθ-, which is not certain. However, the basic forms βλωθ-/βλωθ- cannot have contained a laryngeal, since $l\hbar_2$ would have become $λ\bar{α}$; see p. 245 ff. (possibly therefore $l\bar{ο}/l$). Since De Saussure the word has been connected with Skt. $m\bar{u}rdh\acute{a}n$ - 'head', OE molda 'highest part of the head, skull'. The Avestan cognate kamaraδa 'head', for which the other forms point to *kamard-(Kuiper, Die Sprache, 7.22), suggests PIE * $ml\hbar dh$ -. 107 However, from the semantic

Thus Lac. $\partial n \hat{\alpha} p \bar{\alpha} < *op\text{-}osar\text{-}$, which Frisk maintains s.v. $\partial n \hat{\omega} p \alpha$, is incorrect. The two forms will go back to one basic form, but in my opinion this etymology does not permit of this, so that its correctness must be doubted. The two vowels can only go back to $\bar{a}o$, see the text above; the \bar{a} of this could be based on compositional lengthening (i.e. for example $*op\text{-}\bar{a}io\text{-}$).

¹⁰⁷ The connection with κμέλεθρα (pl., Pamphil. ap. EM 521.34) 'beam', μέλαθρον (II.) 'roof-tree, ridgepole', is not very probable. This word (possibly *kmelħ-dhr-) seems more likely to be non-IE; semantically, too, the similarity is not very convincing. Cf. for ε/α βάραθρον/ζέρεθρον, p. 193. For κ/zero with these words see Kuiper, Μνήμης χάριν, p. 213, n. 9 (κ before vowel).

point of view the connection is weak; moreover, the meaning 'high' for $\beta\lambda\omega\theta\rho\dot{\rho}\zeta$ seems nothing more than a useful guess; it could also mean 'flowering, üppig', especially if the connection with $\beta\lambda\alpha\sigma\tau\epsilon\bar{\tau}\nu$ is correct; cf. $\tau\eta\lambda\epsilon\theta\dot{\rho}\omega\sigma\alpha$ (beside $\mu\alpha\kappa\rho\dot{\eta}$) as epithet of trees. Thus nothing can be said for sure about the original form of $\beta\lambda\omega\theta\rho\dot{\rho}\zeta$ and it may therefore not be used in a single respect as an argument. Cowgill, p. 149, considers * $mlo\hbar_2dhro$ -, with o-vocalism as in $\sigma\phi\delta\dot{\rho}\dot{\rho}\zeta$; however, it is the question whether $\sigma\phi\delta\dot{\rho}\dot{\rho}\zeta$ is IE, see p. 188 s.v. $\sigma\phi\alpha\dot{\rho}\dot{\rho}\zeta$. If the form $\gamma\lambda\omega\theta\dot{\rho}\dot{\rho}\zeta$ in (ps.-) Hes. Cat., pap. H (fr. 96 Rz.³) vs. 86, is a variant, the word is of non-IE origin (cf. p. 193 f.). However, West (Glotta 41 (1963) 282-5) is of the opinion that it is an hyper-Ionism, and thus an artificial form. It would have been formed on the example of Att. $\beta\lambda\dot{\eta}\chi\omega\nu$: Ion. $\gamma\lambda\dot{\eta}\chi\omega\nu$. The idea seems improbable to me.

πρωκτός, Arm. $erastank^c$ is of importance here if these forms go back to *prakt-(Meillet, $Esquisse^2$, p. 142); however, there is no further indication of \hbar_3 . For another explanation see p. 247.

The form τεθρᾶσθαι ἀχεῦσθαι Hsch. (Cowgill, p. 149), which seems cognate with θρώσκω (cf. θαρνεύει ἀχεύει Hsch.), would point to the same divergence as πρᾶτος : πρῶτος. It is not known from which dialect τεθρᾶσθαι comes.

The two forms $\pi\rho\tilde{\alpha}\tau\sigma_{0}$ and $\tau\epsilon\theta\rho\tilde{\alpha}\sigma\theta$ ('my only pieces of evidence', Cowgill, loc. cit.) are in my opinion insufficiently serious objections to the development $\rho\hbar_{3} > ro\hbar_{3} > \rho\omega$.

2. Zero Grade $R\hbar_3$ before Vowel

For zero grade $R\hbar_3$ before vowel the development can also be demonstrated. Those of $TeR\hbar_3$ and $T_eR\hbar_3$ are much more difficult to demonstrate and consequently will be discussed later.

We are concerned here with the forms of the type $\xi\pi$ opov. It is probable that all thematic aorists are transformations of old athematic ones (Wackernagel, Festgabe Jacobi, p. 16 f., Kuiper, Nasalpr., p. 76:6). One would therefore like to assume such an origin for $\xi\pi$ opov as well, but in that case the o-vocalism is striking, for one expects either the e-vocalism of the singular or the zero grade of the plural of the athematic aorist. In the latter case, which is by far the more frequent, if not the only, one in Greek (see p. 224 f.), Greek therefore has αR from vocalic sonant (R). Accordingly one would therefore have to start from * ϵ -per \hbar 3-m (or * ϵ -pre \hbar 3-m) * ϵ -pr \hbar 3 mes ϵ -pr \hbar 3-ent for $\xi\pi$ 0-pov. This athematic aorist is suggested by Skt. imp. $p\pi$ 0 dhi < * $p\pi$ 0-dhi. The latter form would have given * π 0-po\theta1 in Greek; the singular would have retained the e-vocalism (possibly had π 0-po-from * $pre\hbar$ 3-). That is why Kuiper, India Antiqua (1942) 199, explained π 0-p by the zero grade before vowel, i.e. 3 pl. * ϵ -pr \hbar 3-ent > * $\xi\pi$ 0-pev. This therefore presupposes that the \hbar 3 here coloured the

Phonetically ἔπορον might perhaps have developed here, but in this form the ending would in my opinion have been analogically restored. The question is further irrelevant here. Incidentally, it is quite possible that the transformation to the thematic declension took place earlier, so that one could start from 1 sg. * \acute{e} -pr \hbar_3 -om, which we shall do from now on for simplicity's sake. Cf. also p. 251.

vowel that developed before the vocalic sonant ($\xi\pi$ opov, not * $\xi\pi$ apov). With the development of $\rho\omega$ from $r\hbar_3 > ro\hbar_3$ the development which this explanation presupposes is in principle identical, although there might be a gradual difference: $r\hbar_3 > ro\hbar_3 > \rho\omega$ could be accepted and $r\hbar_3 > or\hbar_3 > o\rho$ rejected.

The forms of this type are: ἔπορον, ἔμολον, ἔθορον (all II.) and ἔτορε (Λ 236). Lehmann, PIEP (1952), p. 93 f., arrived at the same idea, evidently without knowing Kuiper's article and, so it seems, Ruipérez, Emerita 18 (1950) 402 f., did too, although he is not entirely clear here. He rejects Schwyzer's idea (p. 362) that in these forms a before vowel had been lost and adds, although he expressly states that Schwyzer regards *ἔθαρε as the original form, that he cannot accept this theory, "segun la cual...el timbre de la vocal reducida o laringal habría afectado al timbre de la vocal de apoyo desarollada delante de la sonante' (p. 402). The reason why he rejects this explanation is very interesting: for one would expect the form *ἔβελον beside (instead of ?) ἔβαλον. In my opinion there are indications that these forms did in fact exist; they will be discussed in a following section (p. 221). It is surprising that Ruipérez did not see this.

It is not clear what Lehmann (p. 94) means by the remark that in ἔμολον "the laryngeal was lost before lengthening the reflex of the resonant; in others [e.g. βλώσκω] it changed both the colour and the quantity". (One gains the impression that he is referring to the type ὀρθός ὀργή discussed immediately before and that "e.g. μολεῖν" is an error for "e.g. ὀργή".) As the lengthening in ρω (στρωτός) is based on compensatory lengthening for the loss of a consonant (* $strh_3$ | $to > *stroh_3$ |to>*stro|to), there can be no question of this with * $\epsilon|p_r|\hbar_3om$; see the criticism in Kuiper, *Lingua* 5 (1955) 319-24. However, the following may be considered a problem. If the o developed when the laryngeal was still spoken, which seems probable, a long syllable comes into being which thereupon, when the laryngeal disappeared, became short again: * $\acute{e}|pr|\hbar_3 om > *\acute{e}|por|\hbar_3 om > *\acute{e}|por|\hbar_3 om > *\acute{e}|por|m$. That, however, in the latter case no lengthening occurred is also evident from γένος βέλος, p. 180. Moreover, it may be asked whether the assumption of an intermediate phase * $\acute{e}por\hbar_3om$, in which both o and h_3 are independent phonemes, is correct and whether one should not instead posit * $\acute{e}p_0r\hbar_3om$, with $_0r$ as (Greek) o-coloured variant of $_1r$, of which the $_0$ became an independent phoneme upon the fall of the laryngeal. See further p. 230.

Cowgill (p. 147 f.) doubts this explanation of $\tilde{\epsilon}\pi$ opov on the strength of the fact that with $r\hbar_3$ before consonant there could already be no question of colouring, since after all he assumes that $\rho\bar{\alpha}$ was the normal development here. As we have seen, this doubt is not sufficiently founded. There are the objections stated above (p. 212) to his

explanation with the aid of analogy: if $\rho\bar{\alpha}$ and $\alpha\rho$ are phonetic, there is insufficient basis for analogic extension of o-vocalism.

It would be good support for the development discussed here if this could also be demonstrated in a case where analogy is out of the question, or where an entirely different analogy would have to be assumed than in the verbal forms. Kuiper, Shortening, p. 24, thought of $\pi o \lambda \dot{v} \zeta$ and $\pi \dot{o} \lambda \dot{v} \zeta$.

For πολύς Skt. $p\bar{u}rv\dot{t}$ points to laryngeal, $*pl\hbar_1\dot{u}-i\hbar_2$. In that case the o-vocalism could be explained from an original declension $*p\acute{e}l\hbar_3$ -u-s $*pl\hbar_3$ - $\acute{e}u$ -s etc. (*πέλυς *πολεύς). However, there is no other indication of \hbar_3 and the comparative and superlative $\pi\lambda$ είων $\pi\lambda$ είωτος $(*ple\hbar_1$ -ison-, $*ple\hbar_1$ -isto-) would then have to be separated from π ολύς, which is improbable. It need not be surprising that the comparative is of a different stem from the positive (Lat. multus — plus, Germ. viel — mehr), but it is improbable that PIE would have had $*pel\hbar_1$ - as against $*pel\hbar_3$ - for this, since the correspondence is too great to be coincidental. However, certainty about this is impossible at this moment. If the stem did in fact have \hbar_1 then one must, as with $*plot\hbar_2$ -us $*pl\hbar_2$ -eu-s (p. 179), start from $*p\acuteol\hbar_1$ -u-s $*pl\hbar_1$ - $\acute{e}u$ -s (which latter form would in my opinion have given $*\pi\epsilon\lambda\epsilon\dot{\nu}\varsigma$ in Greek). OE feala (Meillet, Intr. 8 , pp. 162, 261) cannot, however, be regarded as proof of $*pol\hbar_1us$, cf. Sievers, Ags. Gr. 3 , p. 51, Kluge, Urgerm. 3 , p. 146. For π oλλή see p. 241.

For $\pi \delta \lambda \iota \zeta$ Skt. purás púram purá: púr pūrşú pūrbhih suggest a stem ending in laryngeal; here the zero grade plh- was generalized. Lith. pilìs (i-stem after the accusative pili, with i < m) points to the same thing. The Greek stem form could therefore have been generalized from ante-vocalic * plh_3 -. As it is not possible to demonstrate the h_3 in another way, the proof remains scanty.

These two words cannot therefore be used as argument. Cf. further p. 221 (Rh_1 before vowel) and p. 239 (θοῦρος, κοῦρος). See Add.

3. Zero Grade $R\hbar_1$ before Consonant

Before dealing with the possible other forms of disyllabic roots with \hbar_3 ($TeR\hbar_3$ and $T_eR\hbar_3$), which are very tricky to demonstrate, it is clearer first to discuss the parallel developments of $R\hbar_1$, both before consonant and before vowel.

After the above one may expect beside $\rho\bar{\alpha}$ and $\rho\omega$ a zero grade $\rho\eta$ before consonant, which can be explained with the aid of the laryngeal theory as $r\hbar_1 > re\hbar_1 > r\bar{e}$, $\rho\eta$.

It is striking that this form has been seldom discussed; this is probably because there are only a few forms (which, however, also applies to $\rho\omega$) and owing to the fact that the Ion.-Att. transition $\bar{\alpha}>\eta$ sometimes makes it difficult to determine the original colour (as will appear).

One finds in the verbal adjective: κασίγνητος, τρητός, κλητός, ἐύτμητος (or ἐὺ τμητός), ἀπόβλητος, ῥητός, all II.

It will be shown in the next section that $\tau \mu \eta \tau \delta \zeta$ stems from a disyllabic root with \hbar_1 .

Beside βλητός, which occurs relatively late (Hp.), the *Iliad* already has ἀπόβλητος (B 361 Γ 65) and ἀνάβλησις. The zero grade * g^ulh_1 - also in Skt. ud- $g\bar{u}r$ - $n\dot{a}$ - ($gur\dot{a}te$ 'lifts up').

No-one has doubted that Greek \bar{e} is concerned here. This can also be demonstrated with the following forms.

Τρητός has η both in Pindar and in Attic (Pl., Arist.), where one would otherwise expect \bar{a} after ρ .

Beside κλητός (I 165 ρ 386), ἐπίκλησις (II.), Aeolic also has κλῆσις (Bechtel, I, p. 32), in which $\bar{\alpha}$ would have been preserved (cf. πλάσιον Sapph.).

For κασίγνητος Ionic inscriptions point to \bar{e} (Lejeune, $Trait\acute{e}$, p. 205), whilst it also occurs in Alcaeus (L.P. N 1.12 κ]ασιγνήτων), in Sappho (5.2 κασί]γνητον, 5.9 κασιγ]νήταν) and in Pindar and on Corcyra (JHS, 54.65); Thess. κατί[γνειτος] is of no use here.

Nor is there reason to regard these forms as old full grade, as for instance Frisk (s.v. βάλλω) does, referring to $\pi\lambda\eta\rho\eta\varsigma$. Cf. the hesitation in Chantraine, $Morph.^2$, p. 9, Rem. It is true that from the root * $pel\hbar_1$ -/ $ple\hbar_1$ - Lat. im- $pl\bar{e}tus$, Skt. $pr\bar{a}t\acute{a}$ - (only RV VII 16.8), Lat. $pl\bar{e}nus$ (probably for older * $pl\bar{a}nus$), Skt. $pr\bar{a}n\acute{a}$ - (lexicogr.) correspond, but these may very well be parallel innovations. The expected zero grade here is found in Skt. $p\bar{u}rn\acute{a}$ -, Lith. pilnas, OIr. $l\acute{a}n$, Goth. fulls. Avoidance of identity with * $pel\hbar_2$ -/ $ple\hbar_2$ - in the zero grade will have played a part here. This is clearly an independent case, which may not be used as a starting-point for a general theory.

For -γνητος zero grade is demonstrated by Skt. jātá-, Av. zāta-, Lat. (g)nātus, Gaul. Cintu-gnātus Ari-gnātus.

It is clear that κασίγνητος is an old word: a word to indicate a family relationship, of which the origin of κασι- can no longer have been clear to the Greeks in historical times either. Kuiper gives a convincing derivation from *km-ti (which is to κατά as περί is to παρά, etc.), of which *km is the zero grade of *kom, Lat. cum (Glotta 21 (1933) 287, with semantic and formal parallels). Lejeune (BSL 55 (1960) 20-6) arrived (independently of Kuiper) at about the same interpretation by connecting κασι- < κατι- with Hitt. kati- 'with' (for the meaning cf. συγγενής, cognātus), which he regards as the locative of the stem to which kata and katan belong (Gr. κατά, see Frisk). He suggests for Myc. kasikono the interpretation 'kasikonos' 'collaborator' (cf. διάκονος etc.). For the meaning and the relationship with γνήσιος see Chantraine,

ibid., pp. 27-31. Κασίγνητος is thus formally practically identical with Lat. *cognātus*, of which the second element goes back to *- $\hat{g}_n\hbar_1 tos$.

The importance of the form κασίγνητος in this context cannot in my opinion be overestimated: in itself it is adequate to prove the laryngeal theory, and in the form defended here, that the three laryngeals were preserved down to Greek separately. For κασίγνητος has η, which is not the Ionic-Attic development of $\bar{\alpha}$; it is an old word and cannot be analogic: *γνητός does not occur in Greek in itself (one finds it in proper names, Διόγνητος etc. (VI c., Bechtel, HP, p. 109) and in γνήσιος); there is not a single reason to assume PIE full grade * $\hat{g}ne\hbar_1$ - here: from a morphological point of view one expects zero grade, and the related languages also point in that direction (Skt. $j\bar{a}t\dot{a}$ -, Av. $z\bar{a}ta$ -, Lat. $n\bar{a}tus$, Celt. - $gn\bar{a}tus$; cf. Skt. $j\bar{a}ti$ -, Lat. $n\bar{a}ti$ -o) and notably the parallel $cogn\bar{a}tus$. This therefore gives Gr. $v\eta < \eta\hbar_1$. This development can be explained only by assuming a consonantal element after η (otherwise one would expect $n\partial_1 > v\varepsilon$). The e-colouring must also be ascribed to this element (the laryngeal) as against the universally recognized $\rho\bar{\alpha} < \eta\hbar_2$ (and against $\gamma > \rho\alpha$, Aeol. ρ 0), and also the development of η to CV (not $> \alpha$). This therefore confirms that \hbar_1 and \hbar_2 were still separate phonemes in Greek (like \hbar_3 as emerges from $\rho\omega$). See Add.

Two points may be established on the strength of this. Firstly that p, and therefore probably also p, followed by laryngeal underwent the same development as $p \nmid h$. There is consequently not the slightest reason for the formerly assumed division $p \omega \lambda \omega$: $p \bar{\alpha} \nu \bar{\alpha}$. Secondly, it is evident from $p \eta that one may certainly speak of <math>e$ -colouring laryngeal, and not of the non-colouring laryngeal (although this effect has remained only in Greek and can only be identified in that language).

The development $n\hbar_1 > v\eta$ assumed here is confirmed by νήγρετος and νηλεής, of which the original form began with $n + \hbar_1$; see p. 107 ff. Reference has already been made to the importance of this parallel in the discussion of $n\hbar_1 > n\omega$, p. 214 f.

The same development is also found in $\beta\lambda\eta\tau$ 0, where one expects zero grade and which will therefore go back to $*g^{\mu}l\hbar_1$ -to, and in $\pi\lambda\eta\tau$ 0 < $*pl\hbar_1$ -to, cf. p. 95.

4. THE PARALLELISM WITH ITALIC AND CELTIC

The Greek developments of the zero and the reduced grade have a parallel in Italic and Celtic, $\rho\bar{\alpha}$ $\alpha\rho\alpha$: $r\bar{\alpha}$ ara (both before consonant). In the other languages (apart from Indian) these two forms have coincided owing to the fact that in the zero grade, RH, a vowel developed before the sonant (or rather the sonant developed into VC); both RH and RH thus became RH, which coincided. The essential difference from the development in Greek, Italic and Celtic is therefore that here the sonant in RH became RH0, after which the vowel was lengthened when the laryngeal disappeared in anteconsonantal position: $RH > RaH > R\bar{a}$. It is not so that in the languages mentioned the sonant always became RH0, for in Latin RH1, RH2, RH3, RH4, RH5, RH5, RH5, RH5, RH6, RH7, RH7, RH8, RH9, RH

ascribed to the influence of the laryngeal. The parallelism cannot therefore be explained by other common characteristics of these three linguistic groups.

Nor is a joint intermediate phase between RH and $R\bar{a}$ conceivable in my opinion; for Italic and Celtic this possibility may be considered, but the Greek development rh_1 rh_3 into $\rho\eta$ $\rho\omega$ excludes the possibility of common development in the three linguistic groups. For between RH and RaH ($R\bar{a}$) only something like R_eH is conceivable. Now it is true that ${}_{e}r\hbar_{1} > \epsilon \rho \epsilon {}_{e}r\hbar_{3} > o \rho o$ (it should be noted that neither of these developments has been demonstrated for certain) as against Ital. Celt. $_{e}r\hbar > ara$ must be ascribed to influence of \hbar_{1} and \hbar_{3} on the reduction vowel which first occurred in Greek (otherwise one would have expected $_{e}rh_{3} > _{o}rh_{3} > \text{Lat. } orh_{3}$, e.g. *pors instead of pars); but it seems to me out of the question that in a common intermediate phase R_eH the vowel e that developed before the laryngeal would not have been coloured by the latter. As the laryngeals retained their colour down to Greek, the original colour ought also to have been present in this intermediate phase. But in that case $Re\hbar_1 Ro\hbar_3$ (from $R\hbar_1 R\hbar_3$) ought to have given $R\bar{e}$ and $R\bar{o}$ in Latin and Celtic too. As this is not the case, such an intermediate phase cannot have existed. (For Italic and Celtic a common phase R_eH , R_aH or RaH would be conceivable.)

One can therefore establish only a parallel development.

5. Zero Grade Rh_1 before Vowel

Parallel to op (and αp) before vowel from rh_3 (and rh_2 ; $\xi \pi o p o v$, $\xi \kappa \alpha \mu o v$) one may expect $\varepsilon \rho$ from rh_1 in the same position, as Ruipérez postulated (p. 217). There are in my opinion a few forms in which this development can be pointed to. The agrist ἕβαλον from βάλλω was assumed to go back to * \acute{e} -g" \rlap/lh_1 -om. Here one would therefore expect on the grounds of the foregoing Gr. *ἔδελον, and this form is in fact found in ἔζελον· ἔβαλον Hsch. (with Arc. $\zeta < \delta$). In addition one finds in Arcadian a present -δέλλω. What the historical relation is between these forms, βάλλω ἔβαλον: -δέλλω — ἔζελον, will be discussed below. Reference may first be made to the exact parallelism with τάμνω — ἔταμον: (Att.) τέμνω — ἔτεμον. Consequently, one might consider whether a root *temħ1-/tmeħ1-, not *temħ2-/tmeħ2-, forms the basis here. H_2 has been concluded on the strength of Doric $\bar{\alpha}$ (τμ $\bar{\alpha}$ - and τμ $\dot{\alpha}$ γ ω) in Theocritus and Archimedes. However, these forms have no irrefutable admissibility as evidence, see Schwyzer, p. 185, Zus. 2. (In Theocritus τμα- is found only in διέτμαξεν 8.24; on the other hand there is τμητός 25.275. Archimedes uses τμα- and τμηindifferently: 'oberflächlich dorisiert' (?), Schwyzer, p. 116.) Moreover, the derivatives of $\tau \dot{\alpha} \mu \nu \omega$ tend more to point in the direction of h_1 than h_2 . There are three of them, ταμεσίγρως, τέμενος and τέμαγος. However, these are not of equal age. Ταμεσίχρως is evidently a relic; it occurs in Δ 511 and Ψ 803, on both occasions ταμεσίχροα, connected with χαλκόν, and N 340 (probably a more recent use, ἐγχείησι | μακρῆς, άς εἶχον ταμεσίχροας), each time after the penthemimeres. That τέμενος is old is proved by Myc. temeno (Docs., p. 266). The latter form may be derived without difficulty from *temħ₁- (cf. βέλε-μνον). ¹⁰⁹ In ταμεσίχρως too the ε may have developed from \hbar_1 . For the α see below. On the other hand τέμαχος 'slice of fish' Hp., Ar., is more recent, and ought therefore to have the α analogically from other forms ending in -αχος. True, these are not very frequent, Schwyzer, p. 498:8 (influence of στόμαχος?), but it is important that -εχος does not occur at all (cf. the problem of δόλιχος, p. 238). In my opinion this explanation is to be preferred to that which postulates assimilation from *τεμανος (cf. what is said on p. 206 about words with this vocalic structure) and metathesis (!) in *τεμασίχρως (starting from *ταμασίχρως the explanation would be even more difficult). See Add.

The future τεμέω (Hp.), τεμῶ (E., Th.) can be most simply explained from *temħ₁-s-; a root *temħ₂- would have led one rather to expect *τεμάω. The evidence is weakened by the fact that the form cannot be demonstrated as having occurred at a very early stage and, above all, because futures ending in -έω also occur from \hbar_2 -stems, e.g. καμοῦμαι (Hom.). However, it is striking that, while these futures seem to have been built on the (thematic) aorist (Schwyzer, p. 784), Ionic has (τάμνω) τεμέω ἔταμον; this seems to suggest that this future is not analogic, but does in fact go back to *temħ₁-s-. (If it is nevertheless built on the aorist, it does in any case point to an aorist ἔτεμον in an earlier phase of Ionic.)

After the above had been written, I saw that B. Forssman, *Unt. z. Spr. Pindars*, 1966, p. 158 ff., came to the same conclusion on the strength of Pi. I. 6.22, where the manuscripts all give $\tau \acute{\epsilon} \tau \mu \eta \nu \vartheta$, which modern publishers alter into $\tau \acute{\epsilon} \tau \mu \alpha \nu \vartheta$. This form therefore gives a neat confirmation of the hypothesis.

If it is assumed that ἔζελον ἔτεμον were the phonetic aorists, ἕβαλον ἔταμον must have their vocalism from the present, while on the other hand $-\delta έλλω$ and τέμνω ought to have been formed on the analogy of the aorist. In βάλλω τάμνω the vocalism is easy to explain: τάμνω here suggests a nasal present, i.e. * $tm-n-e\hbar_1-mi$. For the existence of nasal presents of disyllabic roots with \hbar_1 and \hbar_3 see p. 250ff. In the same way βάλλω will therefore also have been formed from * $g^ul_-n-e\hbar_1-mi$. An $i\bar{o}$ -present (Frisk) is conceivable only as a Greek formation, proceeding from the aorist stem βαλ-, but this was, as we saw, δελ- ($-\delta έλλω$ may then thus have developed in this way). For one would expect *βλη from PIE * $g^ul_0\hbar_1-i\bar{o}$ (cf. Skt. $j\bar{t}ryati < *gr\hbar_2-io$ -).

109 Jacqueline Manessy-Guitton, IF 71 (1966) 14-38, is of the opinion that τέμενος is non-IE and derives it (in emulation of Ch. Autran) from Sumerian temen 'barillet de fondation', Akkadian temennu etc., which is also said to be found in place-names in Palestine. It seems to me inconceivable that a Sumerian word, even if it is used as a place-name in Palestine, entered Greek in the living language. Further an Ugaritic form tmn? is mentioned. The semantic similarity is also slight.

Her objections to IE origin are just as inadequately founded. In my opinion there is not a single reason to doubt that we are concerned with a disyllabic root. The assimilation from $\tau\epsilon\mu\alpha$ - $<*temh_2$ - (or from the aorist stem $\tau\alpha\mu\epsilon$ -) also seems an objection to me, but this disappears if the laryngeal was h_1 . It is certain that -nos was a suffix of the proto-language; it is found in $\epsilon\rho\nu$ 0 and $\epsilon\rho\nu$ 0, and also $\tau\epsilon\mu\epsilon\nu$ 0 can therefore go back to $\epsilon\rho$ 1. It is possible that $\epsilon\rho\nu$ 1 derived with the suffix -os from a stem ending in -n, but the same is then also possible for $\tau\epsilon\mu\epsilon\nu$ 0. That the stem $\tau\epsilon\mu\epsilon\nu$ - does not occur elsewhere is not essential: in the case of $\epsilon\rho\nu$ 0 too no n-stem can be pointed to.

Of importance here is Aeol. τόμοντες (Alc. L.P. G 1.15), although in my opinion a compelling interpretation is not possible here. The o of the stem can hardly go back to PIE o; o-vocalism is to be expected only in the perfect (the old form would have been *τέτομα, pl. *τέτμημεν) or possibly in an athematic present (*tom $\hbar_1 mi$), but there is no trace of either. It is therefore most likely that the o is based on an Aeolic development of m. This may have occurred in the present *tmne h_1 mi> *τόμνημι. A more difficult question is whether *étmħ₁om would have become *ἔτομον in Aeolic. For it is conceivable that here the laryngeal determined the timbre of the vowel, so that ἔτεμον developed here as well. On the other hand, it is possible that, despite the h_1 , o nevertheless occurred in Aeolic. To support the one argument one can point to Aeolic κάματος (Sapph.), θάνοντες (Alc.), where *dhunħ₂- became θαν-, and in support of the second to χόλαισι (Alc., = χαλῶσι) and on as against ἀνά; however, laryngeal is not entirely certain in the case of the last two words. Moreover, it is possible that \hbar_2 did colour to a and \hbar_1 did not colour to e. But what seems to me to be the most important point is that the form ἔζελον occurs in Arcadian, where one finds the same development of the sonants as in Aeolic. It is therefore most probable that * $\acute{e}tm\hbar_1om$ became ἔτεμον in Aeolic and Arcado-Cypriot. The form τόμοντες found then indicates that here the agrist borrowed the vocalism of the present. Beside Ion. (Dor.) τάμνω ἔταμον and Att. τέμνω ἔτεμον (both normalized from τάμνω ἔτεμον), these dialects must therefore have had *τόμνω ἔτομον (from *τόμνω ἔτεμον).¹¹⁰ (It is interesting to see that Theocritus has a system τέμνω ἔταμον, a consequence of the Greek rule e-vocalism in the present, zero grade (a-vocalism) in the thematic agrist. See for the distribution of the forms now Forssman, Glotta, 44 (1966), 5-14.) See Add.

Attempts have been made to explain ἔτεμον (and thus ἔζελον) in another way. However, in my opinion the two solutions suggested are improbable.

Τέμνω ἔτεμον could have developed under the influence of a present *τέμω, which was surmised in N 707 τέμει δέ τε τέλσον ἀρουρῆς. Ebel, KZ, 2.48, pointed out, however, that here τέμει cannot mean 'cuts', and translates it by 'achieves', as a present of ἔτετμον; so does Chantraine, Gr. Hom., p. 309. This meaning does in fact fit in excellently as the climax of a typically Homeric simile like this (703-7), for which compare Σ 541-7 (this passage may be more recent, but that has little effect on the value of the parallel for the content). On the other hand there is no semantic indication of any relationship between τέμνω and ἔτετμον. There is consequently no indication of *τέμω (any more than of *δέλω), although in principle the possibility In general the representation of $m \, n$ in these dialects presents a problem. Cf. Lejeune, $Trait\acute{e}$, p. 169. The same problem is found in Mycenaean, which has or/ro, but has a for m and n. Ruijgh, Inleiding tot de Mycenologie, 1966 (privately circulated), § 29, is of the opinion that this is the only phonetic representation (akitito ἄκτιτος, a2tero < *smteros). In his view the type pemo beside pema is analogic: *āmṛ *āmṇtos gave *āmor *āmatos here, which was replaced by *ἄμορ *ἄμοτος or * $\check{\alpha}\mu\alpha\rho$ * $\check{\alpha}\mu\alpha\tau\sigma\varsigma$, and, by analogy with this, one has -ma(tos) and -mo(tos) side by side. Thus one would in that case have to suppose that the secondary -οτος (in -ορ -οτος) would have influenced the ending -ματος, since it is not evident that -or -otos influences -ma -matos. Incidentally, the type

-or -otos is not yet demonstrable, as far as I am aware.

of such a form cannot be denied (cf. Skt. $j\acute{a}yati < *g^uej\hbar_3-eti$). However, in that case the $n\bar{o}$ -present has no historical explanation.

Influence of the future τεμούμαι (Chantraine, Gr. Hom., p. 314) also seems less probable to me, in view of the slight influence of this category in general (cf. p. 000).

The other explanation, proferred by Wackernagel (Sprachl. Unters. z. Hom., p. 14), is the one generally accepted (Specht, KZ, 59.98, Schwyzer, p. 746,7 (cf. 3), Chantraine, Gr. Hom., p. 391, Frisk s.v. $\beta \acute{\alpha} \lambda \lambda \omega$). This explanation proceeds from an original athematic aorist *é-temō-t é-tmō-ent, and assumes that ἕτεμον is based on the full grade of the singular, i.e. *é-temħ₁-om. However, it is not clear why this did not occur with disyllabic roots with \hbar_2 as well. True, only a small group of words is concerned here, but all the same it is striking that with the stems ending in \hbar_2 , which are much more frequent than those ending in \hbar_1 , there is no trace of forms with e-vocalism, whilst in the case of both stems ending in \hbar_1 forms with e-vocalism occur. This tends rather to suggest that \hbar_1 is the cause of these forms.¹¹¹ Further, ἕταμον was derived from *e-tm̄-om, so that the existence of *e-tmħ₁-om (or in general *tmħ₁-e/o-) was recognized in any case.

Quite apart from this, there are other objections to this explanation, which will be successively discussed: a. with the exception of the disyllabic roots with \hbar_1 practically all Greek thematic agrists are derived from a zero grade; b. in Greek nothing suggests an agrist of the type *étem \hbar_1 -t; c. in one case in which this type can be identified, Greek nevertheless has its thematic agrist derived from the zero grade.

- (a) The thematic agrist in Greek is discussed by Schwyzer, p. 746 ff. Those with full grade (p. 746 b 1) must in this connection be divided among three groups:
- (1) ἔτεμον and ἔζελον, which are under discussion here;
- (2) the type ἔπορον, which in any case cannot be explained either from *é-perħ₃-om or from *é-preħ₃-om and in all probability goes back to a zero grade, as stated on p. 216 ff.;
- (3) a remaining group that will be discussed here.
- Re 3. Clearly secondary is ἀγέροντο ἀγέρεσθαι as against ἤγρετο ἀγρόμενος (Chantraine, Gr. Hom., p. 395: "semblent avoir été créées pour les besoins du mètre". In the same way Ruijgh, Etudes, p. 67, with n. 95: *ἀγέρω beside ἀγείρω (cf. δέρω/δείρω). "Le prétérit ἤγερόμην a fini par être pris pour un aoriste vis-à-vis du présent ἀγείρομαι (...), bien que l'aoriste thématique ait normalement le degré zéro (ἤγρόμην)". For πέρθετο, see Chantraine, l.c., p. 389 f., for ἄρετο ibid., p. 392. In ἀπεχθέσθαι one has an imperfect which functions as aorist since the characteriza-
- Forssman, loc. cit., p. 5, n. 3, also seeks the reason here, but gives a different explanation. The 3 sg. *e-temh₁-t became $\xi \tau \varepsilon \mu \varepsilon$, which linked up with the thematic aorists, but in the case of *e-kemh₂-t > *\xi \si \si \si \si \si \text{ut} in the case of *e-kemh₂-t aorist of the type $\xi \chi \varepsilon(\upsilon) \alpha$). The origin of all thematic aorists must, however, be sought in the transition to the thematic declension (e.g. *\xi \cdot dr k^-(e)nt becomes *\xi \cdot dr k^-\cdot ont), which is not dependent on the ending of the stem (-\hat{h}_1 > -\varepsilon; compare the Hitt. forms ending in -anzi), so that it is probable that one has here the same phenomenon as everywhere else. For the rest, all the objections stated in the text apply to this explanation.

tion of the present by -αν-, Schwyzer, p. 700; cf. Chantraine, Gr. Hom., p. 394.¹¹² The same is found in ἔτεκον, ἔπετον (Lesb., Dor.), ἐγενόμην beside the reduplicated presents τίκτω πίπτω γίγνομαι. (Incidentally, ἐγενόμην could also be explained from $*\hat{g}nh_1$ -o-. Skt. ajananta will be an innovation.) $\Theta \in v \in \tilde{v}$ calls for a somewhat more detailed study. This form is explained from a root-aorist *é-guhen-t é-guhn-ent. However, it may be remarked that the zero grade of this root would have given an aorist *ἔφνον (or *ἔφανον, cf. ἔκτανον, which in any case is built on zero grade; see Frisk s.v. κτείνω), so that it would be understandable that this form was abandoned, because the connection with θείνω became unclear. It might be supposed that the form θείνας is a creation of the epic, if one compares Y 481 ὁ δὲ φασγάνφ αὐχένα θείνας with the two other places where forms of this agrist are found: Π 339 φάσγανον ερραίσθη· ὁ δ' ὑπ' οὕατος αὐχένα θεῖνε and Φ 491 ἔθεινε παρ' οὔατα. It might be that Y 481 is based on a verse like Π 339, of which the imperfect was interpreted as a orist. However, both Π 339 and Φ 491 must be a orists. But there is no reason to assume that ἔθεινα is based on θενεῖν, as Schwyzer (p. 755) seems to think; ἔθεινα can as easily be explained as a new formation on the pattern κτείνω: ἔκτεινα. ἔΕπεφνον (II.) is without a doubt an old aorist, having regard to the similarity to Skt. jaghnant etc. A trace of the athematic agrist has perhaps been preserved in ἐπέφατο (cod. ἀπ-)· ἀπέθανεν Hsch. It is conceivable that PIE possessed in addition a second agrist without reduplication, but the only form that could point to this is the ἀπέφατο just mentioned, if this goes back to *-é- g^uhn -to; the evident advantage of this interpretation is that the α of the manuscript does not need to be changed. But if the form *ĕ9ɛvov is old, one would expect this entirely isolated form (with full grade) in the oldest Greek, but it does not occur until Euripides and Aristophanes. A system θείνω — *ἔθενον stands entirely alone in Greek (compare κτείνω ἔκτανον);¹¹³ it can therefore not be seen after what pattern the aorist in Greek could have been formed (as for instance Frisk assumes). It could only be assumed that the form *έθανον to be expected (with θ from θείνω for *έφανον) was replaced by έθενον to prevent homonymy with ἕθανον 'I died' (*ἕθανον would mean 'I killed'). Two further things attract the attention: the indicative of the agrist does not occur and the forms are often accentuated θένειν θένων. Taken all together this suggests that we are concerned here with old present forms (perhaps derived from the old conjunctive *g"hen-e/o- from *g"hén-ti g"hn-énti; cf. also Lith. genù, OCS zeno beside Lith. geniù and (from the zero grade) OCS zenj ϱ , and Skt. hanati). " $\Omega \varphi \in \lambda \circ \nu$: $\delta \varphi \lambda \circ \nu$ are derived from full and zero grade of an athematic agrist (an opinion shared by Frisk s.v. ὀφείλω). The present ὀφλισκάνω will have been built on the agrist ὄφλον (as assumed by Szemerényi, Syncope, p. 202,7 as against Schwyzer, p. 746). The forms ὀφειλήσω, -ησα, -ηκα (Att.) are clearly built on the present. See for this now Ruijgh, Etudes, p. 68: one can also assume for Myc. -operosi a present *ὀφέλω, "dont le

¹¹² It is possible that $\dot{\epsilon}\chi 9$ - goes back to a zero grade if the root began with laryngeal: both * \hbar_1eC - and * \hbar_1C - give Gr. $\dot{\epsilon}C$ -.

True, one has ὀφείλω ἄφελον, but Attic has precisely the agrist ἄφλον here; v. infra.

prétérit ἄφελον s'est conservé plus tard dans l'expression du vœu irréalisable"; and note 97: "au point de vue syntaxique cette forme fonctionne toujours comme un imparfait (ἄφελον = ἄφελλον chez Homère; cf. χρῆν, ἔδει)". The form ἑ λεῖν finally is entirely isolated in Greek.

It therefore seems justified to conclude that all thematic agrists in Greek are derived from a zero grade. The few forms with e-vocalism are old imperfects.

Indian has a number of thematic agrists which have a full grade stem, of the akarat type. This seems to suggest that the theoretically expected possibility of thematization of the singular stem was in fact realized, so that allowance must also be made for this possibility for Greek. I am not convinced that this is correct. It seems to me that here in Indian we are concerned with more recent thematizations (cf. Kuiper, Nasalpr., p. 77). For instance, it is clear that akaram akarat developed from athematic akaram akar (with the ending zero from PIE -t: * \acute{e} - k^uer -t), i.e. in historical time. However, an essential feature here is the difference between Greek and Indian. In the latter language 1 sg., for instance a-kar-a(m) < -m (with secondary m), could be interpreted as thematic form, but the situation is different in Greek. The old athematic agrist to which ἔκλυον, Skt. sfuvam go back, had in the singular *é-kleu-m é-kleu-t, from which Skt. άśravam áśrot developed. But in Greek these forms gave *ἔκλεγα *ἔκλευ[τ], forms attracted towards the (Greek) sigmatic agrist. It is assumed (Schwyzer, p. 744; Lejeune, Traite, p. 80, n. 4), that ἔχευα ἔσσευα and ἔκηα¹¹⁴(II.) are representatives of this type. The zero grade is also found in the athematic medium χύτο, ἔσσυτο (Act. still σύθι ἔρχε Hsch.). The forms ἐχεύατο and σεύατο are secondary; ἠλεύατο therefore presupposes a form *ἤλευα (see Chantraine, Gr. Hom., p. 385). It thus seems that in Greek the zero grade became a thematic agrist, but the full grade a ('pseudo'-)sigmatic agrist (with 'thematic vowel' α), so that therefore a thematic aorist with full grade would be out of the question in Greek. (But see n. 111.)

(b) According to Meillet, *Intr*.⁸, p. 200, the athematic agrist of disyllabic roots did not have the stem form sg. TeRH- (pl. TRH-), but sg. TReH-. In Greek one still finds (Schwyzer, p. 742, γ 1):

```
ἔτλην
ἔδρᾶν
πλῆ(ν)το (*pleħ<sub>2</sub>-)
ἔβλητο
πλῆτο (*pleħ<sub>1</sub>-; Skt. áprāt)
ἀπέσκλη (Ar.; innovation after the intransitive aorist?)
ἀπ-ή-γρᾶ (?)
κατέβρως h.Ap. 127
ἔβλω· ἐφάνη, ἄχετο, ἔστη Hsch.
ἐξέτρω· ἐξεβλάβη, ἐξεκόπη ἡ κύησις EM.
```

The explanation of the η is uncertain. The disputed form ἥνεικα is not considered here. The α-forms of εἶπον seem recent.

The last three forms are considered recent. The medial forms may of course go back to zero grade. Further, reference may be made to:

the agrist of $*g^u e i \hbar_3$ - 'to live', $*\acute{e}-g^u \acute{i}e \hbar_3$ - in ἐβίων;

the aorist of *bhe $\mu\hbar_2$ - 'to be' (Skt. bhav $\bar{\imath}$ ti), *bh μ e \hbar_2 - in Lat. -bam -bas -bat etc. (Sommer, p. 514,521; Leumann, Lat. Gr., p. 327; WH, I, pp. 557 f.), pl. *bhu \hbar_2 -, generalized in $\xi \phi \bar{\nu} \nu$, Skt. $\dot{a}bh\bar{\nu}t$.

The Greek material is therefore very scarce here. On the other hand, there is not the slightest indication of the existence of aorists with TeRH- in the singular. In Indian, too, there is no clear indication of the existence of this type. I know of only one form that might suggest the type in question, Arm. $eker < *\acute{e}-g^uer\hbar-et$, cf. p. 234 s.v. $\beta\iota\beta\rho\omega\sigma\kappa\omega$.

Note. On the other hand, the aorist of the type $\frac{\partial \hat{v}}{\partial x} = \frac{\partial \hat{v}}{\partial x}$ seems to me an old formation that is not based on another aorist type and goes back to the proto-language. A striking feature here is that the lengthening of the stem vowel normal with the s-aorist is absent. In Sanskrit, too, the is-aorist as a rule has the full grade (without lengthening): abodhişam, also in the medium, akramişam akramişi. This suggests that this type is old.

The type TReH-s- (Brugmann, Grundr., Π^2 , 3, p. 418 f.) seems to be wholly a secondary development of the individual languages, as Schwyzer (p. 755 β and γ) believes it is for Greek. Cf. further ἔστρωσα: ἐστόρεσα, ἔζησα/ἔζωσα: ἐβίων. The Indian forms will have to be regarded in the same way, ἔγνων: άjñāsam, πλῆτο áprāt: áprāsam, ἔδραν: con. drāsat.

If these three points are considered it therefore proves that only very few thematic aorists in Greek could be built on an old full grade (θενεῖν ὀφελεῖν ἑλεῖν); that perhaps this is not to be expected in Greek either (they would have become pseudosigmatic aorists of the type ἔχευα); that an athematic aorist of disyllabic roots with a full grade TeRH- cannot be pointed to for certain; and that, of the aorist which did have the stem form *dhuenħ₂- in the singular, Greek nevertheless used the zero grade as starting-point for the thematic aorist (*dhunħ₂- in ἕθανον). It is therefore most likely that the aorists ἕτεμον and ἕζελον are also derived from a zero grade.

See App. III.

6. $TeRh_1$, T_eRh_1 (T_eRh_3)

The exact agreement between γενέτωρ (Hdt.), Skt. janitár-, Lat. genitor and Skt.

janitrt Lat. genetrix, for which Greek has γενέτειρα (Pi.) with full grade of the suffix (incorrect in Schwyzer, p. 381, quoted by Frisk), points to PIE * \hat{g} en \hbar_1 -tor- \hat{g} en \hbar_1 -tr- $i\hbar_2$ (cf. èνατηρ; Lat. ianitrīces thus probably has the i from *ianater-> *ianeter-> *ianiter-, parallel to genitor; only after that was -ter replaced by -trix; Leumann, Lat. Gr., p. 365). It is improbable that the second ε in γενέτωρ -τήρ -τειρα is analogic (to what ?), since the word would certainly have preserved an original α beside θυγάτηρ èνατηρ (πατήρ), if it had not obtained one analogically. The possibility of PIE e is excluded by the comparison with the other languages.

However, the stem γενε- seems to have spread secondarily in Greek and may have displaced other forms; further only γνη- occurs, discussed on p. 000 f.; γενη- is clearly secondary. Besides γενέθλη (II.), γενετή (Ω 535 σ 6 ἐκ γενετῆς, init.) Homer has only γένεσις (Ξ 201 = 302.246). However, the zero grade predominates in this type, so that one would expect *γνη-σις. The form γνήσιος (Λ 102 ξ 202) does not, however, point to the existence of such a form, since it is derived from a form ending in -τος (Schwyzer, p. 466). If γένεσις is old, its full grade as against the zero grade in the other forms could point to old paradigmatic ablaut. But Greek does not have other full grade forms. One further finds beside δμῆσις (II.) δάμασις Sch. Pi. 0.13.98 and beside κλησις (ἐπί- Il.) κάλεσις D.H. 4.18 (to explain Lat. classis!); ἔμεσις Hp. will be a word created by physicians (for the *(F) $\mu\eta\sigma\iota\varsigma < *\mu m\hbar_1 ti$ - to be expected?). In this way ἄροσις (I 580 ι 134) will also be a recent Greek form and will not go back to $\hbar_2 er \hbar_3 ti$ - ($\hbar_2 r \hbar_3 ti$ - would have given *αρωσι-). The forms ταλασίφρων (II.) δαμασίφρων (Pi.) occurring in compounds contain, according to Specht, KZ, 59 (1932), 31-83, in origin the verbal root in the full grade (although in my opinion his argumentation is not compelling) and therefore do not count as evidence of an old form δάμασις etc. They are therefore thought to stand for *δεμασι- etc. Thus ταμεσίχρως may very well stand for *τεμεσι-, on the analogy of (Hom.) τάμνω ἔταμον. It may therefore not be concluded that *τάμεσις or *τέμεσις stands beside τμῆσις (Arist.). Lat. gens forms a separate problem. It is evidently an old word (Naev.). As it cannot go back to $*\hat{g}n\hbar_1ti$ - (this is found in $n\bar{a}ti$ -o) and the assumption of an anit form * $\hat{g}pti$ - is not justified, one must assume a form * $\hat{g}enh_1ti$ - (cf. pars from * $p_e r\hbar tis$). One may therefore envisage here an old paradigm * $\hat{g} enh_1 tis$ ' $\hat{g} ph_1 teis$, to which γένεσις gens — nāti-o go back. For the ablaut cf. Schwyzer, p. 505. Cf. also Lith. $z\acute{e}ntas < *\hat{g}en\hbar_1 tos$ 'son-in-law' and OHG $kind < *\hat{g}en(\hbar)tom$. On the other hand, genitus (as against nātus) will be a recent Latin formation. For germen < * $\hat{g}enh_1men$ cf. $palma < p_elhma$ (for Skt. janman- see Introduction, p. 10).

Βέλεμνον (II.) contains $*g^u el\hbar_1$ -. According to Specht βλῆμα ($*g^u l(e)\hbar_1$ -) stands for *βελεμα ($<*g^u el\hbar_1$ -mn); see Schwyzer, p. 523,5.

The interpretation of τέρετρον (Od.) is not entirely certain. In φέρετρον (Plb.), for instance, the second ε does not go back to \hbar_1 (despite Skt. bharitram), but is secondary for φέρτρον (Σ 236; on the other hand φαρέτρη (Il.) does seem old; *bher-e-tr-). The appraisal of Lat. terebra (*terħ-s-ro- or *terħ-es-ro-, cf. cerebrum tenebrae) is also uncertain. Lat. tarmes 'woodworm' points to *terħ-m-; WH s.v. and

tero. OIr. tarathar, W. taradr 'idem' also suggests $*t_er\hbar$ -tro-; for the reduced grade one may compare φαρέτρη. It is uncertain that πέλεθρον (Hom., πλέθρον Ion. Att.) is derived from $*pel\hbar_1$ - 'to fill'. Δέλετρον (Numen. ap. Ath.) is too recent to be reliable. For τέρετρον both $*ter\hbar_1$ - and $*t_er\hbar_1$ - are therefore possible.

"Aνεμος also belongs here, for which Skt. ániti suggests disyllabic root, and which corresponds to Lat. animus (Osc. anamúm), Skt. ánila- (it is by no means necessary to follow Frisk and assume dissimilation from *anima-) and OIr. animm < *anamon-, W. anadl < * \hbar_2 en \hbar_1 -tlo- or * \hbar_2 en \hbar_1 -tlo- (cf. Arm. holm from * \hbar_2 on \hbar_1 m-; for the type $ToR\hbar m$ - see p. 195 f. s.vv. κάλαμος and κνήμη). Av. aini-van- points to vocalic laryngeal, * \hbar_2 en \hbar_1 -.

It can therefore hardly be doubted that $TeR\hbar_1$ - became $TeR\epsilon$ -. However, a more difficult question relates to the development of $_er\hbar_1$. Here one may expect $\alpha\rho\epsilon$, but $\epsilon\rho\epsilon$ is also conceivable with influence of the \hbar_1 on the reduced vowel ($_e$). One could compare with this the fact that $_em\hbar$ became imi in Indian, instead of ami, p. 208. The cases which could give an answer here are few in number and capable of different interpretations: in theory here it is always possible to explain $\epsilon\rho\epsilon$ by an ablaut form with full grade $(er\hbar_1)$. On the one hand there is no compelling reason in $\tau\alpha\mu\epsilon\sigma$ ($\tau\alpha\mu$) to start from $\tau\alpha\mu$, on the other hand OIr. $\tau\alpha\mu$ is perhaps not sufficient to guarantee the form $\tau\alpha\mu$.

In view of the general 'sensitivity' of Greek vocalism (and the predominance of forms with sps ?), the development sps seems to me the most probable one.

A parallel with $_er\hbar_3$ is rather difficult to find. The form opo expected from it could be seen in Aeol. ἐστόροται (Jo. Gramm.). However, there is no indication that this form (beside ἔστρωτο Il.) is old. It may be analogic to ἐστόρεσα, cf. ἐστόρεστο D.C. (and ἐστόρηται Greg. Cor.). Moreover, a phase $_er\hbar_3$ in the perfect is incomprehensible.

A form with $e^{r\hbar_3}$ may perhaps be found in ovoµa. If the forms that the PIE word for 'name' displays are compared, they can be divided into three groups (only the forms of importance here are given): 1. Skt. nāma, Lat. nōmen; 2. Dor. ἔνυμα, OPr. emmens; 3. ὄνομα, Arm. anun (OIr. ainm, OCS ime). It seems probable that we are concerned here with the remnants of the ablaut of an old word with suffix -m(e)n. The first group points to PIE * $n\bar{o}$ -, i.e. * $ne\hbar_3$ - (possibly * $n_e\hbar_3$ -); the second must then go back to *enħ3- (cf. for this stem form the definitely old words τελαμών and βέλεμν-ον, the latter of which may, however, be based on $*g_u^e lh_1 mn$ - too, v. infra. For *neħ3-/enħ3- see p. 44 s.v. ὄμφαλος and p. 47 s.v. ὄνυξ). The words of the last group have a vocalic element before the n. There is no indication of a laryngeal; see p. 47. H_3 is out of the question on account of group 2 (and therefore also \hbar_2); there is no positive indication of \hbar_1 and it would not explain ővoµ α (assimilation from *ἔνομα is, however, conceivable, cf. ἐρέφω: ὄροφος). These forms postulate a phase *_enħ₃- (cf. OIr. talam $< *t_e l\hbar m$ - beside τελαμών). If this analysis is correct, we therefore have here a case where ovo goes back to enh3. This would demonstrate the principle of this development.

The interpretation that Cowgill, Evidence, p. 156, gives of this word deserves discussion here. He is of the opinion that OIr. ainm indicates that the stem of this word did not have a laryngeal, for *nhmn would have given *náim (the same view is expressed by Hendriksen, Unters., p. 50). Lat. nomen is said to stand for *nomen under the influence of the root *\$\hat{g}n\tilde{o}\$-; Skt. \$n\tilde{a}man\$- represents *\$n\tilde{o}men\$ (according to Brugmann's Law), like Goth. namō. The root was therefore *ne/om-, the declension *nómn nméns. In addition ὄνομα is, he believes, based on assimilation from ὄνυμα. However, the latter is not important, since he assumes that no before labial became vu, so that no was therefore the starting-point after all. There are objections to this view. The vowel before the n in $ovo\mu\alpha$, Arm. anun cannot be explained in this way; on p. 152, Cowgill has demonstrated that the word cannot have had a laryngeal. Nor can the words that suggest *en- (our group 2) be explained. True, a basis *en-emcan be postulated, but its historical forms can only have been *enm- or *nem-; Dor. ἔνυμα would, however, have to go back to *enom-. Finally, one also finds the long \bar{o} in Germanic, OFr. nōmia, MHG be-nuomen. According to Ernout-Meillet s.v. nomen, Arm. anun also points to long o; Hitt. la-a-ma-an is uncertain. The predominance of -mn- in the oblique cases also seems to me to argue against Cowgill's paradigm, Hitt. lamnas, Ved. nāmnā, Goth. namna, OPr. emn- (< *enmn-, as against nom. emmen-<*enmen-),115 Umbr. nomner. Our reconstruction *enħ3-mn- eliminates Hendriksen's objection. A serious difficulty for our reconstruction is, however, presented by the Germanic forms with ŏ, Goth. namo and namnjan (ὀνομαίνω, Hitt. lamnija-, of which the length is not known). The form would have to rest on secondary ablaut (\bar{o}/\bar{o}) , on shortening in $n\bar{o}mn > n\bar{o}mn$ or on disappearance of the laryngeal, *no \hbar_3 mon-> *nŏmon-. The declension can no longer be reconstructed; it might be imagined as follows: $*_e n \hbar_3 - m \acute{e}n$ (- $m \acute{e}n$) $*_e n \hbar_3 / m \acute{e}n - m$ $*_e \hbar_3 - m n - \acute{o}s$. ¹¹⁶ For declension with three ablaut phases of the stem cf. p. 195 s.v. κάλαμος.

If this interpretation is correct insofar as it concerns the form $\eth vo\mu\alpha$, this is of exceptional importance for the whole theory as given here. If $_en\hbar_3$ became ovo, this makes colouring of the reduction vowel by the laryngeal certain for the whole group $_eRH$. For in that case colouring by the laryngeal is also highly plausible in the development of RH-V for the vowel that develops before the sonant and a fortiori for the vowel that arises after the sonant in RH-C.

However, a form with o-vocalism is also conceivable, *on \hbar_3 -mn-, cf. * $\hat{k}ol\hbar_2$ m- etc., OCS plamy 'flame' < *polmen (Buning, Ath. Conj., p. 30). See Add.

¹¹⁶ Vaillant, *Gramm. comp. d. langues slaves*, II, 1 (1958), pp. 205 and 211f., proceeds from *nŏmn ymnos. The same objections apply to this as to Cowgill's view.

Szemerényi, Syncope (p. 110 and p. 244 f.), follows Cowgill and does not accept the stem form en-. In its place, however, he assumes that emmens, "an orthographic or linguistic deviation within Old Prussian history", stands for *immens < *nmen-. But that leaves Dor. ἔνυμα unexplained, for which he assumes a prothetic vowel ε (beside o in ὄνομα). As the latter is unacceptable, there is also no reason to doubt the old Prussian form. Hamp, Evidence, p. 138, gives as the basic form for emmens * \hbar_1 nmnes, of which the \hbar_1 is supposed to explain the e. This implies that the laryngeals were separately preserved down to Old Prussian, which ought to be demonstrated.

7. Full Grade TeRħ₃

The last problem is the full grade $TeR\hbar_3$. Here one would expect in Greek a development TeRo, which, however, is difficult to demonstrate. In the sigmatic acrist, where one expects this form, one finds στορέσαι, κορέσαι and λοέσαι, which will be discussed in the following section. The $o < \hbar_3$ is found only in ἀρόσαι, ὀμόσαι, ἀνοσάμην and perhaps ἐνοσίχθων. First some remarks on these forms.

ἀρόω (Od.), ἀρόσαι (Hes.), ἀρηρομένη (II.); ἄρουρα (II.) Myc. aroura; ἄροτρον (II.). Disyllabic root is confirmed by Lith. ariù árti, árklas, so that one may assume $\hbar_2er\hbar_3$ -. "Αροτρον will be a continuation of $*\hbar_2er\hbar_3$ -tro-m. "Αρουρα may go back to *ἀρο-γαρ $<*\hbar_2er\hbar_3$ -ur, but in view of ἄλευρον (p. 234) $*\hbar_2re\hbar_3$ -ur- is also conceivable.

ομοσαι has a stem * \hbar_3 em \hbar_3 -, see pp. 119, 131 and 234.

ὄνομαι, ὀνόσσεται, ἀνοσάμην (II.) points to ὀνο- $<*\hbar_3en\hbar_3-$. But the zero grade that one expects in the medium, $*\hbar_3\eta\hbar_3-$, would have given *ὀνω-. In that case one must assume $*\hbar_3en\hbar_3-$ >ὀνο-, but then $*_en\hbar_3-$ is also possible ($*\eta\hbar_3-$ gives *vω-). In the latter case it may be connected with ὄνομα, see p. 229f. Lat. nŏta could also be linked with it as $*n\hbar_3-e/o-ta$ ($*\hbar_3\eta\hbar_3-e/o-$ would have become *anota).

ἐνοσίχθων may contain a stem ἐνο- $<*(\hbar_1)en\hbar_3$ - (see Frisk), but there is no confirmatory evidence. Cf. moreover Myc. enesidaone (dat. sg.), Docs., p. 109.

Scarce as this material is, it nevertheless clearly indicates that $(C)eR\hbar_3$ became $(C)\epsilon Ro$.

α. κορέσαι, λοέσαι; στόρνυμι.

Three verbs present the special difficulty of o-vocalism in the sigmatic agrist. The most important forms of these verbs follow.

κορέσαι (II.) was the starting-point of all other forms of this verb, κορεσθήναι (Od.), κορέω, κεκόρημαι (Σ 287 Od.) κεκορηότε (σ 372). All presents (κορέννυμι Them. etc.) are recent. Lith. *šérti* 'to feed' confirms disyllabic root and shows the *e*-vocalism.

 $\lambda o(F)$ έσαι is probably the basic form for $\lambda o \tilde{u}$ (II. 10 times, Od. 19 times) $\lambda o \tilde{u}$ (II. twice, Od. once); see Frisk. For further interpretation see below.

στόρνυμι (Hdt., S.; καστορνύσα ρ 32), ἐστόρεσα (II.), ἔστρωτο (Κ 155). Στρωτός (Hes.), Lat. strātus, Skt. stīrņá- point to *sterħ-, as does Skt. sva-stara-(<*-storħo-). Lat. sterno, OIr. sernaim — whatever the exact origin of these forms may be — point to the existence of forms with e-vocalism.

Whilst the aorist offers a problem here, the original form of the present is no less difficult to track down. Comparing στόρνυμι with ὅμνυμι, for which Skt. $\acute{am\bar{t}ti}$ points to an old present * $\hbar_3 em\hbar_3 - mi >$ *ὅμομι, one arrives at sg. * $ster\hbar_3 - (mi) >$ *στερο-, pl. * $str\hbar_3 - (mes) >$ *στρω-, * $str\hbar_3 - (ent) >$ *στορ-. Assuming that this reconstruction is correct, it must be doubted whether the 3 pl. στορ- was the starting-point for the present στόρνυμι (and thus for ἐστόρεσα?). On the other hand, a nasal present is widespread; Ved. $strn\acute{o}ti$ (RV once), Av. staranaoiti point to *str-n-eu-mi,

OIr. sernaim more to *stṛ-n-eħ3-mi, but Ved. stṛṇáti may be secondary for stṛṇóti. Lat. sterno also suggests a nasal present. Since beside the stem *str-eħ3- the form *str-eu- emerges from Goth. straujan and Lat. struo, it is obvious to start from *str-n-eu-mi-. The original development of *str- in Latin (*stor-) and Old Irish (*sri-) has been replaced by another ablaut form. In Greek one would expect *σταρ-. If this reconstruction is correct, the o-vocalism must come from elsewhere. This development has a parallel in θόρνυμαι (Hdt., [S.] Fr. 1127,9), besides which the old form is found in θάρνυσθαι = κυΐσκεσθαι Hsch. It is evident from θαρνεύει· οχεύει, σπείρει, φυτεύει Hsch. that an old present ending in -n-éu-mi -n-u-més forms the basis here. The o-vocalism here is doubtless due to θορεῖν. Entirely comparable is the replacement in πέρνημι (after περάσαι; the original *pr-n- in Aeol. πορνάμεν(αι)) and τέμνω (after ἔτεμον for τάμνω, p. 221ff). This would mean that the o-vocalism in the agrist is older than in the present. However, there is no indication of a thematic agrist *ἔστορον, nor is it probable that this form would have been transformed into ἐστόρεσα (since there is no parallel for such a transformation). One should therefore probably start from a stage *σταρνυμι ἐστόρεσα. The important place of the agrist is also evident from the forms in Homer: present only in καστορνῦσα ρ 32, ppf. ἔστρωτο K 155, further 21 aorist forms. True, this aorist only occurs in the more recent parts (I 4 times, Ω 3 times, Od.), but the fact that this type of aorist is old is evident from ἐκορέσσατο, which appears not only in the Odyssey but also at several places in the Iliad (ANTX), and notably from (the only active form in) Π 747 πολλούς ἂν κορέσειεν ἀνὴρ ὅδε τήθεα διφῶν. It can hardly be demonstrated that this last verb had a disyllabic root ending in h_3 (*κρωτος in κρωτάνεροι· βάναυσοι πολίται, καὶ ἐξελευθεριῶται Hsch. ?), but, having regard to the parallelism with ἐστόρεσα, this is probable. Secondary influence of κορεσα- on the agrist of στόρνυμι is neither semantically nor formally plausible (the verbs do not have a single parallel form in Homer).

The form that one expects here in the signatic aorist is *στερόσαι < *sterħ₃-s-. The existence of this type seems to be confirmed by Myc. rewotorokowo ('lewotrokhowos') and rewoterejo ('lewotreios') beside λοετροχόος (Σ 346 Od.), which supposes an original form *λεγοσαι for λο(γ)έσαι λοῦσαι. This therefore suggests a Greek metathesis λεγο->λογε-. However, this does not explain general o-vocalism in the other languages; see for these forms Cowgill, p. 159, for Arm. loganam also Evidence, p. 108. The problem becomes even more difficult if Hitt. lahhuwai- 'to pour' belongs here; Winter (Evidence, p. 108) consequently states that it does not (lahhuw-< *leħ₂y-). And yet an exclusively Mycenaean metathesis loye->lewo- is not very probable, since in that case this form would have entirely disappeared again. One could now assume parallel to this a metathesis στερο-> στορε-. That would also explain why ὁμο- ὀνο- remained unchanged (a development στερο-> στορο-> στορε- is therefore improbable). Ruipérez, Emerita, 18 (1950), 386-407, assumes that the metathesis occurred in the future, where *στερόω was replaced by στορέω (κορέει(ς) Θ 379 N 831 P 241), since in his opinion the category -ὁω did not yet

exist then. However, in general there proves to be practically nothing of influence of the future on the agrist.

Moreover, the form * $\mathring{\epsilon}$ otepooa < * $\acute{\epsilon}$ -ster \mathring{h}_3 -s-m corresponds fully to Skt. \acute{a} stariṣam. This is usually regarded as secondary, in my opinion without reason. With a recent form one would be more inclined to expect *astāriṣam, like asāniṣam, but here one has the old form, cf. p. 227 f.

Summarizing, one may therefore say the following about these three verbs. As secondary influence is improbable, the parallel forms will point to the same old category. The forms of $\sigma\tau\dot{\rho}\nu\nu\mu\iota$ and $\kappa\rho\dot{\epsilon}\nu\nu\nu\mu\iota$ with their cognates point to a disyllabic root; for the former $\sigma\tau\rho\omega\dot{\epsilon}$ suggests \hbar_3 . The o-vocalism in the stem of these three verbs therefore seems ultimately caused by this \hbar_3 . In the present it has been introduced on the analogy of the aorist, as the parallel $9\dot{\epsilon}\rho-9\dot{\epsilon}\rho-\nu\nu\mu\iota$ ($\ddot{\epsilon}9\rho\rho\nu$ $9\rho\omega$ -) suggests. In the aorist one finds $ToR\epsilon$, whereas one would expect $T\epsilon Ro$. This seems to point to metathesis, the more so as the old form appears to be found in Myc. 'lewo-'.

8. Material of the Disyllabic Roots with \hbar_3 and \hbar_1

Now that the Greek developments have been established, a survey follows of the material, with some remarks on the genesis of the separate forms, insofar as of importance here.

a. Disyllabic Roots with h3

θρώσκω, θοροῦμαι, θορεῖν (II.). The nasal present θάρνυσθαι ὀχεύειν Hsch.. from which is derived θαρνεύει ὀχεύει, σπείρει, φυτεύει Hsch., seems old; θόρνυμαι (Hdt., [S.] Fr. 1127,9) may have its vocalism from θορεῖν. The form τεθρᾶσθαι ἀχεῦσθαι Hsch. presents serious difficulties. I can explain it only as analogic formation on the basis of θάρνυσθαι : τεθρᾶσθαι = θόρνυσθαι : *τεθρᾶσθαι, cf. στόρνυμι ἔστρωται. Relationship with θρέομαι 'to cry aloud' (A., ἀλλο-θρόος Od.) (Frisk) should be rejected on semantic grounds. Θόρυβος therefore also remains outside this.

βλώσκω (κατα-, προ- Od.), μολοῦμαι, μολεῖν, μέμβλωκα (II.). The connection with Serb. iz-mòliti 'to show', Slov. moliti 'to reach, pass', is not semantically compelling. However, if this points to a present stem * $mol(\hbar_3)$ -, it could be used to explain μολεῖν, see p. 217.

πορεῖν, πέπρωται (II.); πρωτός see p. 211. Cognate with this is Skt. $p\bar{u}rt\acute{a}$ 'reward' and Lat. $pars < *p_e r \hbar_3 ti$ -.

τιτρώσκω (Hp.) τρώ(F)ω φ 293, τρώσομαι ἔτορε Λ 236, ἔτρωσα; τρωτός (Il.). A more recent aorist is also (ἀντ-)ετόρησα (Il., Chantraine, *Gr. Hom.*, pp. 391, 416). Cf. also τέτορεν ἔτρωσεν and τετόρη τρώση Hsch. See Add.

βιβρώσκω (Babr.), ἔβρων (h.Ap. 122), βέβρωκα (Il., βεβρώθοις Δ 35); βρῶσις (Il.); βρωτός (E., X.) agrees with Lith. girtas 'drunk', Skt. gīrṇá- 'swallowed'. The

laryngeal is further evidenced by aja-gará- 'goat-swallowing' (Av. aspō-gara- 'devouring horses', Lat. carni-vorus) $< *-g^u or\hbar o$ -, cf. θυμο- δημο-βόρος (II.). Arm. $eker < *\acute{e}-g^u er(\hbar)-et$, Lith. geriù gérti 'drink' display the e-vocalism. The connection with βάραθρον must be abandoned, since there is no trace here of the expected o-vocalism. That with δέρη (Frisk) has nothing to support it.

ὄμνυμι, ὀμοῦμαι, ὄμοσα (II.), ὀμώμοται (A.), ὀμώμοκα (E.). The root ὀμο-(ὀμόσαι, ἀν-ωμο-τί Hdt.) is the same as that in Skt. $\acute{a}m\bar{\imath}$ -ti, PIE * $\hbar_3em\hbar_3$ -. The Greek present is of course an innovation. One could consider starting from * $\acute{e}m\hbar_3$ -ti * $m\hbar_3$ - $m\acute{e}s$ * $m\hbar_3$ - $\acute{e}nti$, Gr. * \acute{e} μοτι * μ ωμές * \acute{o} μοντι and explaining the stem ὀμ- by the 3 pl. However, this does not seem an adequate starting-point for the \emph{o} -colouring of all forms. In itself the aorist presupposes * $\hbar_3em\hbar_3$ - \emph{s} -. Ομωμο- may also point to \hbar_3 -see p. 119. In Sanskrit the zero grade of the plural has been eliminated. Here may also belong ὀμοίτος for * \acute{o} μο- \emph{F} -τος, see Frisk s.vv.; there is no ground for his scepticism.

For κορέννυμι, στόρνυμι, λούω and ἀρόω, ὄνομαι see p. 231 f.

b. Disyllabic Roots with h1

ὲρέσσω (II.), Att. ἐρέττω is denominative; ἐρέτης (II.), Myc. ereta; *ἐρετηρ in Ἐρέτρια corresponds to Skt. aritár-. Beside this root form stands the full grade II *(\hbar_1)re \hbar_1 - in Lat. rēmus (the derivation from *rē-smos is improbable, since Lat. *rē-cannot be an ablaut form of this root). Lith. iriù irti represents the zero grade (which in Greek would be *(\hbar_1)r \hbar_1 -> ἐρη-, not ἐρε- as Frisk suggests, I, p. 553; this ἐρη- is perhaps found in Lesb. τέρρητον if from *τρι-ερη-τον, Schwyzer, p. 274).

ὲμέω (II.), ἐμέσσα (Ξ 437), ἐμήμεκα (Hp.); Skt. vámiti, Lith. vémti confirm the disyllabic root. In Homer O 11 αἴμ' ἐμέων and Ξ 437 αἴμ' ἀπέμεσσεν (for αἴμα γέμεσσεν ?) have no trace of γ. Skt. verbal adjective vāntá- $<*um\hbar_1tó$. In Greek *(γ)μητός would conform to this, so that ἔμεσις is probably secondary (p. 228). For ἔμετος (Hdt.) one could compare κάματος (i.e. $*u_em\hbar_1tos$), but here an analogic formation is more probable.

ἀλέσσαι, ἀλετρές ἀλετρεύω (Od.), Myc. aretere points to disyllabic root $^*\hbar_2el\hbar_1$ -. Od. ἀλείατα (v 108) is graphic for * ἀλήατα from * ἀλη-γαρ; to this Arm. aliwr corresponds, like albiwr beside φρείατα (Φ 197; from * φρηαρ). The latter thus points to PIE $^*bhr\bar{e}$ - $^*\mu_r$. In the same way one must therefore start for aliwr ἀλείατα from $^*\hbar_2le\hbar_1$ - $^*\mu_r$ (not from * αλε-γαρ as Frisk believes). The thematized form occurs in ἄλευρον (Ion.-Att.; from * άληγρον). Av. aša- * arta- may represent $^*\hbar_2l\hbar_1$ -to-(this would be Gr. ἀλη-, but the forms with ἀλη- are probably secondary, v. Frisk s.v. ἀλέω).

ἀρέσαι (II.) beside ἀρετή points to $*\hbar_2er\hbar_1$. The forms ἀρείων ἄριστος are not entirely clear. Ἀρείων is evidently secondary as against Myc. aro_2a 'arjoha' (for ἀρείων see Seiler, Steigerungsformen, p. 116 ff.). If they are derived from this stem, arjos- must go back to $*\hbar_2er\hbar_1$ -jos- ($*\hbar_2r\hbar_1$ -jos- would have given *ἀρημος); cf. $μέζ-ων < *meg\hbar_2$ -(jos-). Ἄριστος is probably not based on $*\hbar_2r\hbar_1$ -istos (>*ἀρε \hbar_1 -

ιστος?). Άραρίσκω, aor. ἄρσαι, has no disyllabic root and therefore can only be very distantly cognate.

τάμνω (II.; τέμνω γ 175, Hdt.; not cognate is τέμει N 707, see p. 223), τεμῶ (Ε.), τάμον (II.), ἔτεμον (Att.); τέτμηκα Arist., τετμημένος, ρ 195. Τμήγω (Nic.; ἀπο- II.), τμήξας (II.); -έτμαγον (δι- η 276), τμάγεν (II.). The original system was τάμνω (for *ταμνημι) — ἔτεμον (<*έ- $t\eta$ μ \hbar ₁-om), see p. 221 ff., where the dialect forms and the derivatives are also dealt with.

βάλλω, ἔβαλον (II.) beside Arc. -δέλλω (ἐσ-, ἐκ-), ζέλλω (EM), ἔζελον goes back to βάλλω (for *βαλνημι) — *ἔδελον (< *έ- g^u Įħ₁-om). Βλῆτο βέβληκα (παρα-) βλήδην are probably all based on zero grade, like βλητός (Hp., see p. 219). For βέλεμνον see p. 228; for βέλος from * g^u elħ₁-os cf. γένος, p. 180.

πίμπλημι (for the μ Schwyzer, p. 689) of the root *pelħ₁-/pleħ₁-, of which the zero grade is found in Skt. pūrṇá- etc., see p. 219. Full grade I may be found in Skt. parīṇas, párīman- 'fullness'. Skt. pūryáte is based on *pļħ₁-ie-. Hom. πλῆτο probably has zero grade, as against full grade in Skt. á-prāt. For Skt. pṛṇáti see p. 252. The present system seems the most difficult one. As Skt. pipṛmáḥ can be explained (p. 245), sg. piparmi may be analogic. Conversely, πίμπλαμεν will have been derived on the analogy of ἴστημι ἴσταμεν from πίμπλημι, ibid. The most self-evident is therefore PIE *pi-pleħ₁-mi *pi-plħ₁-més, rather than Specht's *pi-pelħ₁-mi (KZ, 59.106).

γίγνομαι (p. 243), γενέσθαι (p. 225), γέγονα γέγαμεν (p. 244); γενέθλη, γενετή, γένεσις (p. 228), γνήσιος κασίγνητος (p. 219 f.) all II. The laryngeal is lost in γένος (p. 180) and γόνος, Skt. $j\acute{a}na-<*\acute{g}on\hbaro-$.

καλέω, καλέσαι, κέκλημαι, κεκλήσομαι II.; κλητός (I 165 ρ 386; πολύ- Δ 438 Κ 420; τηλέ- (also -κλειτος II.), κλήδην (I 11, έξονομα- Χ 415 Od.), κλῆσις (ἐπί-II.). The forms with κλη- can hardly all be regarded as secondary; there is no example for καλε-/κλη-, while analogy would be more likely to operate in the direction of καλε-/καλη- (cf. γενη-, beside γενε-/γνη-), as indeed in καλήτωρ (Ω 577, cf. O 419 N 541), Καλήσιος Z 18. This interchange must therefore probably be regarded as old ablaut. Καλέω may be based on the aorist, but here one would expect full grade (with e-vocalism, *ἐ-κελε-σα). Nor can the α be explained by a nasal present * k_l -n- $e\hbar_1$ -mi > *καλνημι, while there is no indication of this formation either (*κάλλω, cf. βάλλω). Nor does Greek have any old nouns with καλε-. Connection with κέλομαι (as conjunctive present * $kel\hbar_1$ -o-) is semantically disputable; Frisk connects it with κέλλω (Od.) 'to run a ship aground', which is no less dubious from the semantic point of view. I can explain the form καλέω only by a present * $k_ele\hbar_1$ -mi > *καλημι; see for this infra s.v. ἄνυμι (and cf. Umbr. kařetu < *kaletōd).

 γ αμέω, ἔγημε (II.) may be based on the same formation as καλέω; here, however, not a single other ablaut form is known. (Frisk's "ἔγημα eine einsilbige Reduktions-stufe" is characteristic of his unclear idea of the PIE ablaut; the form is most simply explained as an analogic formation from the stem γαμ-, cf. σφαλ- ἔσφηλα). The interpretation of γαμβρός is entirely uncertain, see Frisk. Skt. $j\bar{a}r\dot{a}$ - 'suitor, lover', is probably a loan word, see Mayrhofer s.v.

ὄλλυμι, ὀλοῦμαι, ὀλέσαι ὀλέσθαι, ὅλωλα (II.); ὀλέκω; ὅλεθρος, ὀλετήρ (II.), ἀλεσίκαρπος (λ 510) suggests a disyllabic root * $\hbar_3 el\hbar_1$ -. The present may be a Greek innovation, cf. ὄμνυμι. Hitt. *hullai*- may perhaps be cognate (Couvreur, *Ant. Class.*, 12 (1943), 108). For νωλεμές see p. 110.

ἄνυμι (ε 243) ἀνύω (Att. ἀνύω); ἄνω < *ἀνϝω (Κ 251 Σ 473 (?) γ 496); ἥνυσα 'to effect, accomplish, win' belongs with Skt. sanóti 'to win'. Disyllabic root is demonstrated by asāniṣam, sāta-, and sína- 'supply, provision' (<*senħ-o-, see p. 208) and Hitt. sanhzi 'to seek, endeavour'. One could connect the aorist ἥνεσα with this (*έ-senħ₁-s-), but this does not appear until fairly late (Specht, KZ, 59.93, Schwyzer, p. 752). Schulze's conjecture (Quaestiones, p. 158 f.) of *ἐννεσιεργούς for ἐντεσιεργούς (Ω 277) is attractive on account of ε 243 θόως δέ οἱ ἥνυτο ἔργον and Σ 473 καὶ ἔργον ἄνοιτο (fin.; ἄ!), but remains dubious. For the metrical lengthening (of the full grade ἐνε-) ἐνν- see Chantraine, Gr. Hom., p. 100 f. (ἐνοσίχθων, ἐννοσίγαιος, εἰνοσίφυλλος and others). However, it is not clear how ἐνν- was replaced by ἐντ-.

The form of the present calls for a more detailed treatment. Kuiper has shown (Nasalpr., p. 91 ff.) that there is little reason for the assumption of a nasal present from a root ending in -n (i.e. the type *sn-n-eu-mi) and that here one must, as with bhanákti, tanóti, tanakti, start from *t_en-éu-ti *t_en-ék-ti.¹¹⁷ In accordance with the type *t_en-ék-ti is *k_el-éh₁-mi, καλέω, supra (κέλομαι could be the conjunctive present, *kelh₁-o-, of this, as of *t_enékti *tén-k-ō, Goth. peihan; o.l., p. 121 f.). For ἄνυμι, sanóti the form *s_en-éu-mi is in that case self-evident. If the u-enlargement is not old (*sen-h₁-/sn-eh₁- beside *sn-eu-, as with *str-eh₃- *str-eu-, *dr-eh₂- *dr-eu- *dr-em- (in Gr. δραμεῖν) etc.), both forms may be analogic for original *s_en-éh₁-mi; however, this is not important to the root vocalism.

This recalls the type Skt. *irajyáti* beside *ṛnákti*. Bartholomae, *Studien z. idg. Sprachgesch.*, 1890/1, p. 122, started from **ṛr-eĝ*- or **ər-eĝ*-; so did Persson, *Wurzelerw.*, p. 245,1, and Kuiper, *Nasalpr.*, p. 58. The form *ər*-, i.e. $\hbar r$ -, however, became *r*-, not *ir*-, in Indian (otherwise Sanskrit would have to have forms with *i*- that correspond to Greek ones with 'prothetic vowel'). The form *ṛr*-, for which the notation *er* is used here, is confirmed by comparison with the type *tanákti*. However, for *irajyáti* Gr. $\delta p \epsilon \gamma \omega$ points to a laryngeal as first phoneme, * $\hbar_3 r e g$ -. This leads to the reconstruction * $\hbar_3 e^r - e g$ -(*mi*) for *iraj*-(*yáti*). One therefore has of this root all the forms discussed here together:

```
*\hbar_3 r-n-é\hat{g}-mi in Skt. r,nákti

*\hbar_3 r-én-\hat{g}-\bar{o} Lith. ranszies, ON rakkr, MHG rank 'slim' Skt. irajyáti r4g7 Gr. \hat{o}p\hat{e}γ\omega
```

Iradhanta, Gr. ἐρέθω, may also have had a group $h_e r$ -.

That such forms occur with in- is demonstrated by inak sati 'endeavours to reach' beside nak sati, $n\acute{a}\acute{s}ati$, PIE * $\hbar_1 en\acute{e}\acute{k}$ -/ $\hbar_1 ne\acute{k}$ -, Gr. $\grave{e}vesk siv$, of which the laryngeal can also be demonstrated in another way. Here the correctness of the reconstruction is further confirmed by the fact that the laryngeal explains the i- (as in sina- <* $s_en\hbar o$ -, p. 208), since e^n - in Indian would have become an-.

¹¹⁷ His spelling ηn is identical with en; it designates a group with n before which in the separate languages a vowel appears that does not go back to full vowel in the basic language.

On the other hand, Lat. unguo cannot therefore have had a laryngeal as first phoneme on account of Skt. anákti, not *inakti.

τρητός. The e-vocalism is confirmed by Germanic, OHG drāen, OE práwan < Germ. * $pr\bar{e}$ -. The formation of the aorist τέτρηνα (X 396 Ψ 198), Att. τετρᾶναι is unclear. One is reminded of τρᾶνής, Lith. trinù trìnti, Latv. trùts. In view of the a-vocalism these forms probably belong to * $ter-\hbar_2$ -/ $tr-e\hbar_2$ - with another enlargement. For τέρετρον see p. 228 f.

σκέλλω (κατα — ομαι A.). Disyllabic root is suggested by σκελετός ('dried up' Pl. Com., 'dried body' Phryn. Com.): σκληρός Hes. etc. The original verbal system is difficult to reconstruct; the aor. ἀποσκλῆναι (only Ar. V. 160; again analogic to this is ἀποσκλαίη Hsch.; the latter form gives no basis for h_2 , cf. LSJ s.v. σκληρός) and the perf. ἔσκληκα (ἐν- Hp.) may be recent. The present σκέλλω from a stem *skelħ₁-, however, suggests in comparison with -δέλλω τέμνω an original *σκάλλω (not = σκάλλω 'to stir up, hoe' Hdt.) — *ἔσκελον with analogic σκέλλω. A form *σκάλλω does in fact presuppose σκήλει (ε) Ψ 191 (Fick *σκείλειε; the same idea is given for instance by Curtius, Verbum, I, p. 307); this would then go back to *skl-n-eħ₁-mi. Cognate with this περισκελής S. and perhaps also ἀσκελής Hom. (despite Frisk). Bechtel's interpretation (Lex., p. 66) is all the same probably the correct one: with ἀσκελὲς αἰέν (α 68 fin.) and ἀσκελέως αἰέν (Τ 68) cf. νωλεμὲς αἰεί (fin.) and νωλεμέως; thus the α- is probably privative. There is no reason to regard ἀσκαλέως ἄγαν σκληρῶς Hsch. (with ά- intensive) as a mistake for ἀσκελέως (Frisk): the α may be due to influence of *σκάλλω. The interpretation of σκελετός beside σκληρός is uncertain. Recent Greek forms are probably σκελεφρός (Hp., -ιφρός Erot.) beside σκληφρός (Pl.). Apart from σκελ-ετός (Schwyzer, p. 502) as against σκελε-τός (idem, p. 743,3) it also remains uncertain in the latter case whether this form goes back to * $skel\hbar_1$ -tos, or, like $\kappa\acute{a}\mu\alpha\tau\circ\varsigma$, to * $sk_el\hbar_1tos$.

 π άλλω has not been interpreted for certain. Only if it is in fact cognate with π ελεμίζω and Lat. *pello* is it of importance here. Πελε-μ- (beside Goth. *us-filma*, OIcel. *felms-fullr* 'terrified') may in that case be based on **pelħ*₁-*m*-. Lat. *pello* (with the Old Irish compounds ending in -*ella* < *-*elnā*-; secondary for -*nē*-?) may go back to **pelnō* (with secondary full grade), so that π άλλω may have developed from **pl*-*n-eħ*₁-*mi*; see p. 251.

èνδελεχής (Pl.) perhaps points to a noun *δέλεχος 'length'; the relationship with Skt. $d\bar{\imath}rgha$ -, Av. daraga-, Serb. $d\ddot{\imath}g$ (*dlhgha-) shows disyllabic root, so that for *δελεχος one must possibly start from * $delh_1ghos$. Full grade II is found in the Skt. comparative $dr\bar{\imath}gh\bar{\imath}yas$ etc. A problem is presented here by δολιχός. The ι can hardly have developed by dissimilation from o, since o in Greek is never subject to assimilation or to dissimilation, Schwyzer, p. 255 f.; it is conceivable from a, but in that case one would also have expected *ἐνδελαχης (where assimilation is possible), but there is nothing that positively points to a; nor is $o - a - o > o - \iota - o$ demonstrable (any more than $o - \varepsilon - o > o - \iota - o$, which is more likely to become o - o - o, Schwyzer, loc. cit.). Viewed from Greek, one should start from * $dolh_1gho$ -. A reduced grade

* $d_el\hbar_1gho$ - cannot explain the first o; only influence of \hbar_3 could be considered here. The zero grade * $d_l\hbar_1ghos$ would have given * $\delta\lambda\eta\chi\sigma\varsigma$. Hitt. daluga- (i-stem) does not offer any elucidation. According to Hendriksen, Unters., p. 59, the u is graphic for the velar pronunciation of the l before k (i.e. dalga-), with $l\hbar > al$). Seiler, Steigerungs-formen, p. 101 f., cannot be right in assuming $\delta\lambda\iota < l$.

δέλεαρ/βλῆρ 'bait'. The data are: δέλεαρ Ε., δελεάζω Hdt.; βλῆρ Alcm.; δείλατα Call. Fr. 177.17; gen. δελείατος Numen. ap. Ath. 7.305a; δέλευρα Ath. loc. cit. The interchange δ/β confirms that we have here various ablaut forms; it is self-evident to assume that these go back to paradigmatic ablaut. Δέλεαρ and δέλευρα point to a noun ending in - μ_I . The stem forms must have been * $g^\mu el\hbar_1$ -> δελε- and * $g^\mu l(e)\hbar_1$ -> βλη-. The root is similar to that of βάλλω, and possibly identical with it. Δελείατος may have been formed on the analogy of φρέαρ φρείατος, as also δείλατα. (The connection given by Frisk with βλέτυες 'leeches' is untenable; this is more likely to be non-IE, like βδέλλαι 'idem'.)

ἄημι is based on a root * $\hbar_2 \mu e \hbar_1$ -; for cognate forms see p. 57 f.

Fερ(ε)-/Fρη-. Beside εἴρω ἐρέω the perfect εἴρηται (II.; Arg. Fερρημένος) points to * $μe-μrħ_1-toi$; connected with this are ῥητός (Φ 445, παραρρητός I 526 -ά N 726), ῥῆσις (φ 291); also ῥήτηρ I 443, ῥήτρη ξ 393. One may therefore assume * $μrħ_1-tos$ for ῥητός. On the other hand, Skt. vratά-, Av. urvǎta- probably stem from * $urħ_1-eto$; a different view is stated by Thieme, IIJ 3 (1959) 150.

For ἄνεμος see p. 229.

C. SPECIAL PROBLEMS

1. The Development of ToRH-C and $T_R^{\dagger}\hbar_3$ -C

Now that the development of the various ablaut forms of the disyllabic roots for the three laryngeals has been broadly discussed, a number of problems remain that will be discussed in the following sections.

Viewed from PIE, the question arises of the representation of ToRH before consonant, for which, parallel with TeRH, one would expect in Greek ToRe ToRa ToRo. However, these forms are rare, and consequently it has been thought (the first to do so was De Saussure, $M\acute{e}l$. Nicole, p. 511) that these forms were represented by ToR, that in other words the laryngeal disappeared without trace after o-vocalism.

This question is complicated by the fact that in Greek ToR also seems to correspond to PIE $T\bar{R}$ (TRH). After the above it is clear that this possibility may be considered for TRh_3 only: for the timbre (of ToR) can be explained only by influence of the h_3 .

One therefore finds in Greek oR, which sometimes seems to go back to oRH and sometimes to $R\hbar_3$. Needless to say, a close distinction should be made between these two cases. True, it may be assumed that $R\hbar_3$ became $oR\hbar_3$, and that only afterwards

did this become oR, like PIE oRH became oR, but this would first have to be proved. The cases which are adduced as proof of this development will be discussed separately here. The material comes from Brugmann, Grundr., I^2 , p. 477, Hirt, Idg. Gr., 2, p. 185 f., Meillet, Diall. i.-e., p. 68 f., Schwyzer, p. 363 (Lehmann, PIEP, p. 94, merely repeats Schwyzer).

For oRH > oR the following are cited:

ἀμοργή (Hp.) 'watery part which runs out when olives are pressed'; from ἀμέργω 'to pluck or pull', τὰς ἐλάας 'to squeeze out (juice)' (Frisk). There is no reason to assume a laryngeal here. The connection with Lat. *marceo* 'to wither, droop, shrink' is phonetically difficult $(c-\gamma)$ and not semantically compelling.

κόρση does not belong with κέρας, v. Frisk.

μορφή does not belong with Lith. márgas 'motley', v. Frisk.

 π o ρ θ μ ό ς (Meillet) 'ferry, place crossed by —, strait' (Od.) belongs with Lat. portus, Av. pərətu-, which point to anit root (beside περάσαι etc., p. 199 f.).

To connect o $\bar{\iota} \sigma \circ \varsigma$ 'withy' (Thphr., Ael. Dion.) with $\bar{\iota} \tau \dot{\epsilon} \alpha$ 'willow' (- $\eta \Phi 350 \kappa 510$) and, on the strength of the length of the ι (see for this Frisk) and the connection with Skt. $v\bar{\iota}t\dot{a}$ - ($vy\dot{a}yati$ 'to wind'), to assume a laryngeal, is too hypothetical to be used as an argument. Cf. also $\bar{\iota}\tau v\varsigma$ ($\Delta 486 E 724$) with $\bar{\iota}$ also placed in the same category with the same degree of certainty.

φόρτος (Od.) φορμός (Hes.), beside φέρτρον (Σ 236) φέρμα (A.), comes from the anit root *bher-; there is insufficient indication of PIE disyllabic root here.

κοῦρος (II.), Arc. κορρα, Myc. kowo, is derived from κορέσαι. Comparable is θοῦρος (θοῦρις II.), which is connected by some with θρώσκω. However, here there is the possibility that θάρνυσθαι points to a root variant *dhr-eu-, so that *θορρος may go back to *dhor- $\dot{\mu}$ -o-. If both forms are based on an u-stem, a zero grade *dhrħ3-u-> θορυ- could be considered. For κοῦρος the form κόρυξ· νεανίσκος Hsch. might point to this. But in addition one finds κόρυψ and κόριψ (see Frisk, I, p. 921), which might point to non-IE origin for this word.

οὖλος 'woolly'; the comparison with Skt. tirna, Gr. λῆνος, is not further stated by Frisk. His connection of it with εἰλέω is unverifiable. The word cannot be explained with sufficient certainty.

βροντή. Only -βρεμέτης (ἐρι-, ὑψι- II.), βρεμεαίνων ἠχῶν Hsch. might suggest disyllabic root, but against this is -βρέντᾶς (B 16.66: cf. βρενταί βρονταί Hsch.). For -βρεμέτης one may compare -ρεγ-έτης, Skt. sravát- (Persson, Beiträge, p. 2.688).

τόρμος 'hole or socket in which a pin is stuck' (Hdt.; more recent is τόρμα Lyc.); τρητός τέρετρον suggest \hbar_1 . Τέρμα τέρμων τέρθρον do not belong with this (but rather with *ter \hbar_2 -, Skt. tárati, tiráti < *tṛ \hbar -éti, tīrṇá-, Hitt. tarḥzi 'is powerful, can'), which likewise do not have a trace of laryngeal. For this word and the following one see infra.

 π ό ρ ν η (Archil., Ar.) 'prostitute' is perhaps cognate with πέρνημι περάσαι (Aeol. πορνάμεν Hsch.) as 'bought slave' (LSJ) or 'brought over the sea'.

τόλμα Att. is perhaps derived from τολμάω (as suggested by Solmsen, Beitr., I,

p. 266, Boisacq s.v., not *τολμjα, as stated by Meillet, op. cit., p. 6 ff., Schwyzer, p. 283). Τολμάω itself may have been derived from *τόλμη, which is found in Dor. τόλμα (Pi.) (cf. for instance ὀργάω from ὀργή). This is therefore the oldest form of this group, which has the same stem as τλῆναι etc. (p. 200). The comparison with OHG hamma < *konħm-a (p. 196 f. s.v. κνήμη) and OHG halm etc. < *kolħm-(p. 195 s.v. κάλαμος) suggests a noun *tolħ2m *tlħ2m-; cf. ὀργή infra.

 π ó τ μ o ς is the only word in which \hbar is believed to have disappeared after occlusive. It probably belongs with πίπτω (cf. for the meaning Lat. casus etc.). This word conjures up many questions. The Homeric system πεσέονται ἔπεσον πεπτεώς (Φ 503 χ 384, both times with synizesis; πεπτηώς perhaps does not belong here, Chantraine, Gr. Hom., pp. 428, 430 with n. 1) does not give a clear indication of laryngeal. Nor are the Indian forms with i sufficient to demonstrate laryngeal (as Frisk thinks, II, p. 522). If there was one this ought to have been h_1 . Πίτνω (Pi., A.; for πιτνέω see LSJ) can hardly be explained as a recent formation and therefore seems old; it could be the matization of a present * $\pi i \tau v \eta \mu i < p_e t - n - e \hbar_1 - mi$. It is doubtful whether πέτομαι belongs here, since ἔπτατο πταμένη here tend more to suggest h_2 . Then it is dubious whether ποταμός stems from the same root: the transition 'falling' > 'river' suggests a torrent, which is not the typical meaning of ποταμός (cf. the Homeric epithets μέγας, ἐύρροος, καλλίρροος, εὐρὸ ῥεών; for διιπετής see Schmitt, Idg. Dichterspr., p. 183 ff. ('flying against (in) the sky'). On the other hand, Δ 452 points to a mountain brook). There is thus no certainty in my opinion that $\pi \acute{o} \tau \mu o \varsigma$ had a laryngeal.

 $R\hbar_3 > oR$.

κονι-ορτός belongs with ὄρνυμι and therefore has the anit root * \hbar_3er -.

 $\kappa \circ \rho \delta \alpha \xi$ has no etymology; Skt. $k \dot{u} r dati$ is probably a loan word, v. Mayrhofer. $\ddot{o} \lambda \mu \circ \varsigma$ 'round smooth stone, cylindrical body, mortar' has from the semantic point of view only a slight agreement with Skt. $s \bar{u} r m t$ 'trough to collect water'; the etymology has therefore been abandoned by Frisk.

στόρνυμι is explained as *stṛħ₃-n-eu-mi by Ruipérez, Emerita, 17 (1949), 106-18. However, Skt. stṛṇomi points to *stṛ-n-eu-mi; *stṛħ-n-eu-mi would have given *stīrṇomi. There is inadequate support for this formation too; Skt. dhūnoti is recent for dhunoti after the participle dhūtá-; θάρνυμι: θόρνυμι is not an argument, since this op is the form to be explained; in themselves these forms tend rather to point to a Greek innovation than to parallel PIE formations. (Λίναμαι beside ἐλῖνύω cannot go back to the same root on account of the ἐ-. Κίνυμαι is recent, like Skt. krīṇáti, besides which there are still traces of krǐṇáti.)

νεώ βορτον νεωστὶ βεβρωμένον Hsch. The second element seems cognate with $*g^u r \hbar_3 tos >$ βρωτός. The explanation that the laryngeal was lost in composition and op is the Aeolic development of r is not a convincing one. A recent formation after βορά ('food' A.), -βόρος (Il.) βορός ('gluttonous' Ar.) seems more probable to me. (If an attempt is made to emend the word, νεόβορον Schmidt, LSJ, it loses its value for the argumentation.)

πολλή beside Skt. $p\bar{u}rv\bar{t}$ could be added to this list, if πολλ- went directly back to * $pl\hbar_3\mu$ -. However, this is in no way certain. The original * $pl\hbar_ui\hbar_2$ may have been replaced in Greek by a form with πολ- from other forms; cf. p. 218 f. The syncope πολλο- <*πολυλο- (<* $pl\hbar_3u$ -lo-?) seems highly improbable to me. (Szemerényi, Syncope (!), p. 189, is also of the opinion that the form must be explained otherwise, but has still to publish this explanation.)

 $\delta \rho \gamma \dot{\eta}$ 'natural impulse, mood, anger', $\delta \rho \gamma \dot{\alpha} \omega$ 'growing ripe, swell, to be eager', Skt. $\dot{u}rj$ - 'strength, power'. For the meaning cf. Lith. $na\tilde{r}sas$ (* \hbar_2ner -t-) 'courage' and 'wrath'. Since the consonantal stem in Sanskrit is older than $\bar{u}rj\dot{a}$, allowance must be made for the declension of an original consonantal stem, which may have been * $\mu orh\hat{g}$ -s, acc. $\mu erh\hat{g}$ - η (in OIr. ferg 'wrath'?), gen. * $\mu rh\hat{g}$ - δs . Gr. $\delta \rho \gamma \dot{\eta}$ will therefore be more likely to go back to * $\mu orh\hat{g}$ -.

There is consequently not a single case that points irrefutably to the last development discussed, $R\hbar_3 > oR$; the interpretation of $\pi o \lambda \lambda \dot{\eta}$ is too uncertain, $\partial \rho \vartheta \dot{\phi} \zeta$ and $\partial \rho \gamma \dot{\eta}$ are more likely to go back to full grade with o-vocalism (and therefore belong to the other category). Nor is there any theoretical support for this idea. In the first place it is incomprehensible that no $\alpha \rho < r\hbar_2 - C$ (and $\epsilon \rho < r\hbar_1 - C$) is known, while $\rho \bar{\alpha}$ is more frequent than $\rho \omega$. The idea that op developed from $\omega \rho$ is defended by Brugmann, Grundr., I^2 , p. 477, on the strength of the parallelism $\omega \rho / \rho \omega$ with $\alpha \rho / \rho \omega$. However, it is not probable that the latter is an arbitrary interchange, although there are still problems of detail here. The absence of the parallel forms $\alpha \rho$ and $\epsilon \rho$ stated above also applies here as a counter-argument. It must of course be borne in mind here that Brugmann regarded only $\rho \omega$ as the phonetic development (although he also considered $\rho \bar{\alpha}$, cf. p. 210). A development $r\hbar_3 C > o\rho C$ cannot therefore be regarded as having been demonstrated, and it is not plausible on theoretical grounds either.

The situation is more difficult with the assumed development oRH > oR before consonant. Here too the material is scanty: τόρμος, πόρνη, πότμος and τόλμα may be considered, and from the second group ὀργή and ὀρθός. But it cannot be doubted that τόλμα belongs to the stem *telħ₂- and it cannot easily be explained as an innovation (there is no further trace of a stem *τολ-).

As counter-examples mention can be made only of χρόμαδος ὅμαδος στοναχή κόναβος κόλαφος, which, however, may be explained as analogic forms. Δοάσσατο, ποταμός and ἄνατο are uncertain. The latter form is perhaps analogic. However, the stem ὀνο-, like ὀμο-, points to the development from laryngeal to vowel after o; cf. Persson, *Beitr.*, p. 2.686.

Theoretically the following may be considered: firstly that it cannot be seen why the laryngeal disappeared after syllable with o-vocalism, secondly that it is possible that a consonantal laryngeal was not vocalized, as for instance in Indo-Iranian. For Greek, too, one seems to have to assume this in certain cases. See for this problem as a whole p. 254.

2. Loss of the Laryngeal in Composition

Hirt, *Idg. Gr.*, 2, p. 184 ff., has the interesting thought that the combination of the loss of the laryngeal and the *o*-vocalism originally stems from composition. The loss of the laryngeal in composition will be further discussed here.

In Vedic the loss of o (\hbar) is known, AiGr. 1.82 f. and 93 ff. The same phenomenon is found in Avestan. For instance

```
stīrņá: \acute{a}-stṛtá-\acute{k}īrtí-: \emph{cark}ṛtí-\emph{deva}-tta (from *\emph{dh}3to-, Gr. δοτός) sū-tí-: \emph{sú}-\emph{su}-ti- 'easy birth' \emph{sī}- 'to lie': \emph{ni}-\emph{si}-tā 'night' \emph{dī}- 'to shine': \emph{dī}-\emph{di}-\emph{vi}-\emph{gr}-: \emph{tuvi-gr-\'a}- (not *-\emph{gira} < *-\emph{g}<sup>[u]</sup>ṛ\hbar-o-) \emph{á}-\emph{hve} < *\emph{\'e}-\emph{ghu}-\emph{ai}) \emph{á}-\emph{bhva}- < *\emph{\'e}-\emph{fhu}-\emph{o-} (not *\emph{\'e}-\emph{ghu}\hbar-\emph{ai}) \emph{á}-\emph{bhva}- < *\emph{\'e}-\emph{fhu}-\emph{o-} (not *\emph{\'e}-\emph{fhu}-\emph{fhu}-\emph{o-})
```

Of course, the form of the simplex was often restored in the compounds: $s\dot{u}$ - $s\ddot{u}$ -ta, $pr\dot{a}$ - $t\ddot{u}rti$ -. The cases with \hbar after o-vocalism in composition, where the laryngeal prevents lengthening in accordance with Brugmann's Law, must therefore be viewed in this way (type aja- $gar\dot{a}$ - $<*g^uor\hbar o$ -, p. 10).

Before vowel one therefore has -TRH-o->-TR-o- (or TRH-o->TRo->TRo->?). However, Kuryłowicz, Apophonie, p. 172 (and p. 197f.), gives an incorrect interpretation of the development before consonant as -TRO->-TRO-C- (i.e. -TRH-C->-TRH-C->-TRH-C-). According to him, one would therefore have a fundamentally different development than before vowel, viz. a shift in the syllabicity. This is improbable, and moreover one would expect from RO(RH) in Indian Ri (e.g. *carkriti-<*-kroti-). His further assumption that RO became R in Indian has no support and is superfluous if, instead of the unexplained shift in the syllabicity, one assumes disappearance of the (consonantal) laryngeal, -TRH-C->-TR-C-.

Kuiper has discussed the phenomenon in *Die Sprache*, 7 (1961), 14-31 (and *Lingua*, 11 (1962), 225-30). He doubts that it goes back to PIE. Almost all instances that are adduced come from Vedic. He further assumes that the (few) forms of the type parī-tta developed by metathesis of the laryngeal, *pari-dħta > *pari-ħdta > parī-tta.

In this way there is thus an indication of the preservation of the laryngeal in composition down to the separate languages ($-d\hbar to$ -). However, in my opinion this does not exclude the possibility of PIE origin. (The type $par\bar{\iota}tta$ is probably a compound that first appears in Indian, as Kuiper also assumes.)

It is understandable that everywhere else, also already in Homeric Greek, the form of the simplex has been restored in composition, so that the original form is still found in isolated instances only. This consequently hampers proof and gives all the more value to the possible cases.

Independent parallel development is also possible. Kuiper has pointed to a similar phenomenon in a Munda language, Sora. In Latin others have pointed to Consus < *con-dħtus. If J. P. Smit's explanation of cognitus < *cognatus < *cognaħtos < *- $\hat{g}n\hbar_1 tos$ is correct, this points to the same phenomenon in Latin, but not in PIE (that would have been *- $\hat{g}n$ -tos > *cogentos > *cogintus); see p. 204.

Here the Greek material should therefore be considered.

Hirt (p. 186) mentioned the following cases.

ὄβριμος (II.): βρίμη; these words are probably of non-IE origin, see p. 54.

ἐπισκύνιον (II.) 'skin of the brows': σκῦλα 'spoils'. However, a connection with σκύλος 'animal's skin, hide', is more self-evident. The etymology is further unknown.

ἔγκυτι (Archil.) is too uncertain to be used as an argument (Frisk s.v. and s. κύτος).

In my opinion not the slightest value may be attached to these words. The following seem more important to me.

If ἴγκρος is based on *en- $k_{\Gamma}h_{2}$ -o-, it must have lost the laryngeal, for otherwise one would expect *έγκαρο-. It is then entirely in line with νεογνός mentioned below. στρατός, Aeol. στρότος, parallel to Ved. ά-strta-. However, there is no indication in Greek of origin in composition. See further below.

βρότος 'gore' has been compared with Skt. $m\bar{u}rt\acute{a}$ - 'clotted'. Leumann, $Hom.\ W.$, p. 124 ff., rejects this explanation on the strength of the phonetic difficulties and gives another explanation that is difficult to summarize. He assumes that it is an artificial word from epic language and bases his view on the passage E 339 f. The expression ἄμβροτον αἷμα occurring here, borrowed from an older passage, has, he says, been wrongly interpreted as 'Nichtblutsblut', from which βρότος = αἷμα has been concluded. If the identification with $m\bar{u}rt\acute{a}$ - is correct, ἄμβροτον could be interpreted as 'uncongealable blood' (* η - $mr\hbar$ -tos > * η -mr-tos > ἄμβροτος), but 'immortal blood' is more self-evident. However, it remains difficult to see — despite Leumann — how βρότος 'blood' was concluded from this locution.

γίγνομαι is cited by Kuryłowicz, Apophonie, pp. 172, 197 f. PIE * $\hat{g}i$ - $\hat{g}n\hbar_1$ -o-would have given * γ ι- γ ενο-, Lat. *gigano. Skt. $\acute{a}j\bar{i}$ -janat, Av. $z\bar{i}$ -zan-nti are thematizations of * $\hat{g}i$ - $\hat{g}en\hbar_1$ -mi. For the aorist ἐγενόμην see p. 225. For the perfect see below. The same problem would be presented by κέκλετο, the aorist of κέλομαι, if the stem is * $kel\hbar_1$ - (p. 235). The same applies to ὀμοκλή if *ὀμο-κλ- \bar{a} < * $-kl\hbar$ - \bar{a} . I am not

certain that κλόνος 'confused motion, turmoil, battle-rout' belongs here (Frisk), on account of the meaning.

Another word which does belong here is $v \varepsilon \circ \gamma \circ \varsigma$, which has many parallels in the other languages, Goth. niuklahs ($<*-knahas < *-\hat{g}n\hbar_1o-kos$ (but see Feist); not -kuna-), ainakls ($<*aina-knaz < *oino-\hat{g}n\hbar_1os$; Feist has a different opinion), Lat. privi-mali-beni-gnus (not -ganus; cf. Leumann, Lat. Gr., p. 202), Celtic, e.g. Gaul. Trutiknos, Enignus, Av. \bar{a} -zna- ('innate'), Phryg. $ov \varepsilon \gamma v \phi$; 118 with io derivative $ov \varepsilon \gamma v \circ \varsigma$. Gaul. Abegnia . Cf. Abegnia . Cf. Abegnia . Cf. Abegnia . Skt. Abegnia . Skt. Abegnia . (not $^{*-pura}$ -) 'fulfilling desires'.

There is consequently no reason to assume for γέγαμεν loss of the laryngeal in composition, which reduces the possibility that τέτλαμεν is based on this. Moreover, it would not be comprehensible why beside τέτλαμεν a form τέτληκα (τετληότ-) existed, where one would after all expect τε-τλά-. But τέτληκα is also recent, since one expects *te- $tolh_2$ - (pl. *te- tlh_2 -). (Perhaps Lat. tetuli goes back to this form.) It cannot be taken for certain that βεβολήατο (I 3), βεβολημένος (I 9 ~ κ 247) points to a perfect *βεβολα (cf. Chantraine, Gr. Hom., p. 435, and Frisk s.v. βούλομαι). It is possible, but not demonstrable, that the perfect of the type τε-τλη- goes back to medial forms with zero grade; only beside βέβληκα do such forms occur in Homer (βέβληται etc.). On the other hand, passive forms of θνήσκω, κάμνω and τλήναι are inconceivable and the medio-passive perfect is as a whole recent, since the perfect itself is perhaps in origin cognate with the medium (see p. 133). It therefore seems most probable that the type τε-τλη- is of Greek origin and likewise the vocalic interchange. Cowgill (p. 150) speaks, in emulation of Kuryłowicz (Apophonie, p. 197), of a 'superzero grade' ($\tau \lambda \ddot{a}$ - compared with $\tau \lambda \eta - \langle *t l \hbar_2 - : \tau \lambda \eta - \langle *t l e \hbar_2 -)$, which has been formed on the example of the type στη-: στα- and the (Greek) a-vocalism of the zero grade of anit roots ($R > \alpha \rho/\rho \alpha$ etc.). Here, therefore, * τ ετολα * τ ετλημεν will first have been replaced by *τετληα (cf. also τετληότι) *τετλημεν, this by *τετληα τέτλάμεν and finally *τετληα by τέτληκα. In the same way τέθνηκα τέθναμεν arose; here τέθναμεν cannot be based on loss of the laryngeal, for *dhe-dhun- would have given *τε-θα- (γέγονα γέγαμεν and τέθνηκα τέθναμεν therefore stem from the same system).119

¹¹⁸ In a Greek (!) inscription, MAMA, 167: ουεγνφ υί $\tilde{\phi} = \tau \tilde{\phi}$ ἰδίφ υί $\tilde{\phi}$. *Ouegnos 'selbst erzeugt' < *sye- \hat{g} n h_1 -o-; for *sye- cf. Skt. sva-jāta-, sva-jana-.

The same problem may be found in π ίμπλημι π ίμπλαμεν, to which in Sanskrit píparmi pipṛmáḥ conforms. The plural forms may go back here to *pipṭmes, and píparmi be a secondary form based on the plural (and on the analogy of píparmi pípṛmaḥ 'to ferry', which in Vedic has an aniṭ root), while on the other hand π ίμπλημι seems old in the Greek system (*pi-pleħ₁mi); Av. (ham-pa-)frāi-ti presents a parallel. It therefore seems that π ίμπλαμεν is based on a similar secondary ablaut to τέτλαμεν (*pleħ₁- and *pṭħ₁- had after all coincided in πλη-). Skt. pipṛmáḥ will be based on loss of laryngeal in composition. The stem form χρε- (beside χρἄ-) of κίχρημι (Schwyzer, p. 689, Frisk s.v.) points clearly to new formation of a weak grade. The other presents with this interchange are π ίμπρημι κίγκρημι ΐλημι and τίτρημι (Kuryłowicz, Apophonie, p. 205, n. 49).

The cases for which loss of the laryngeal in composition should be considered are therefore στρατός, ἴγκρος and γίγνομαι/νεογνός. Even if στρατός were the only case this seems to me to ensure the principle for Greek too: it seems undeniable that it belongs with στόρνυμι στρωτός, on the strength of the semantic parallels, and in that case another explanation is not possible. Cowgill (p. 155 with n. 27) assumes that one must start from PIE *ster- beside *ster \hbar_3 -. In Indo-Iranian a distinction in meaning is apparent, str- 'to lay low, strike down (enemies)': str- 'to strew, spread out'. This division may of course also be secondary. His remark (n. 27): "Presumably the enlarged and unenlarged roots were not at first completely synonymous. ... Later each language moved toward (either) reuniting the two in a single paradigm, (or else eliminating the ster-forms)" is improbable: differentiation from one paradigm is much more frequent. In any case Greek στρατός does not have the meaning of Ind.-Ir. str-, and the meaning is entirely identical with στρωτός (στόρνυμι) and Lat. strātus. His invocation of PIE *ster- therefore does not seem justified.

3. The Presumed Development of RH as $R \ni$

In the old view that the ∂ was exclusively vocalic, it was self-evident that the group sonant- ∂ was reproduced in the separate languages by sonant (in consonantal function) followed by short vowel. Thus $\tau \lambda \ddot{\alpha}$ - was explained from *tlo- (as for instance still in Chantraine, $Morph.^2$, p. 12; less definite is ibid., p. 9).

Within the laryngeal theory, which assumes that ∂ was usually consonantal (∂, \hbar) , one expects in the group CRHC a vocalic sonant (RH), with the Greek developments $\rho\bar{\alpha}$ $\rho\eta$ $\rho\omega$). It is not impossible to assume for the proto-language a vocalization CRHC, but this is not very probable. So Cowgill states, pp. 150 and 153. In any

The replacement by the short \check{a} is perhaps demonstrable in the perfect of ἱλάσκομαι, if B. 10.8 ἕλλᾶθι goes back to *σε-σλᾶ-θι as against ἕλλᾶτε (Call.), ἵλᾶθι (Theocr.): here *σλᾶ- could go back to *s/ħ- (an opinion not shared by Frisk). However, a problem is presented by the forms with e-vocalism, Lac. hιλ $\bar{\epsilon}$ Foι; this would lead one to expect *ἕλληθι. But there are many problems attached to the interpretation of the forms of this stem.

case it seems called for to start from CRHC, and to consider the other possibility only when the facts cannot be explained otherwise. In the preceding chapter it was demonstrated that τέτλαμεν πίμπλαμεν can be easily explained in another way. The forms πλάθανον (p. 181) and γνάθος (p. 190) do not seem an argument for $R\hbar > R$ either. For the forms with α of ῥήγνυμι τμήγω πλήσσω see p. 183; in the case of the last verb these do not appear until Ionic-Attic, and in the case of the first two one expects $\epsilon < \hbar_1$ (for \hbar_1 in τμη- see p. 221ff.).

Reference may be made here only to γλώσσα γλάσσα, which seems to preserve an old ablaut; in an isolated word like this it seems less probable that we are concerned with a more recent analogic form (γλα-instead of γλα-?), as Cowgill, loc. cit., assumes. Pedersen, Cinq. décl., p. 30, assumed with regard to these forms that they go back to an original paradigm γλῶσσα *γλασσᾶς cf. ὀρόγυια etc., p. 37. In the element preceding the suffix -ih₂, however, one expects no full grade, and therefore no ovocalism either. 120 If the stem contained a laryngeal, one could explain λω from a zero grade lh_3 , but in that case one would have to assume that beside lh_3 a vocalization $l\hbar_3$ occurred and that \hbar_3 became α . If the larryngeal were \hbar_2 , then in any case, apart from the full grade with o-vocalism $(o\hbar_2 > \omega)$, one would expect $\lambda \bar{\alpha}$ instead of $\lambda \bar{\alpha}$. In my opinion the stem cannot therefore have contained a laryngeal, and one must start from PIE *glogh- *glgh- (or *glegh-). This ablaut, and in particular the form with lengthened o-vocalism, makes an old feminine highly improbable and tends more to point to a root noun, which in Greek would have been *γλώξ *γλαχός. The existence of this is confirmed by the pl. γλῶχες (with elimination of the old ablaut). When the forms with $\gamma\lambda\omega\chi$ - were generalized and those with $\gamma\lambda\alpha\chi$ - disappeared, the old feminine γλάσσα $< *glgh-i\hbar_2$ was replaced by the newly formed γλώσσα.

A few other Greek words possibly had the same ablaut. For πτώξ -κός (II.): πτάκα (acc. A.), πτάκις (Com. Adesp. 1127) 'hare' πτώξ *πτακός is probable, but in view of the connection with πτήσσω, Dor. πτᾶξαι (of which the ā must go back to eħ2), one must count here on the possibility of *ptoħ2k-s *ptħ2k-όs. 'Pώξ 'breach, narrow passage', ἀπόρρωξ etc., which belongs with ῥήγνυμι, also had a laryngeal. 'Pώξ ῥᾶγός 'grape' is not of importance here (in view of the ā) and is perhaps non-IE. (A word with this structure that is definitely non-IE is δρώψ; see p. 72.) It is difficult to appraise ῥώψ (ῥῶπες Od.): χρυσό-ρραπις (Od.). Connection with ῥέπω, ῥέμβομαι οr ῥάπτω, as Frisk suggests, does not seem to me to have a sufficiently firm semantic basis. On the other hand, the comparison with ῥόπαλον seems self-evident (I see no reason to connect this with ῥέπω, as Frisk does). 'Ράβδος will also belong here. But if καλαῦροψ καλαυρόφις and ῥάμνος ('various prickly shrubs', cf. ῥῶπες) are cognate with this, one must think of non-IE origin instead. Τρώξ, -γός (Strattis, V B.C.) 'gnawer, name of the weevil': τράγος (Od.) may have been derived from

That the stem — but not the element directly preceding $i\hbar_2$ — could have o-vocalism is evident from ὀρόγυια, which must go back to * $\hbar_3 ro\hat{g}$ -us- $i\hbar_2$. One would like to posit * $\hbar_3 r_e \hat{g}$ usi \hbar_2 for this form, but the parallel form ἀρεπυία points to full grade; * $\hbar_2 r_e pusi\hbar_2$ could not have become other than *ἀραπυία.

τρώγω ἔτραγον. Beside *πρῶξ πρῶκες 'dewdrop' (Call., Theocr.) one has πρόξ, -κός 'roe deer' (ρ 295), πρακνόν μέλανα Hsch., περκνός πρεκνός, Skt. pýśni- etc.; for the meaning see Frisk under these words. True, there is no proof here of an ablaut * $pr\acute{o}k$ -s * $pr\acute{k}$ - $\acute{o}s$, but the first form may be regarded as certain. This is also evident from κλώψ (Hdt.), which without doubt belongs to κλέπτω, and φώρ (Lat. fur), which is derived from the root *bher- in φέρω. If Arm. erast-an-k° may be based not only on *prhkt- but also on *prkt- (Boisacq), a noun *prhkt- s *prkt- ós is possible for πρωκτός. As, according to Meillet, Esquisse², p. 42 f., both r and \bar{r} (r) and e^r became ar in Armenian, one might also assume * $pr_e kt$ -. This view would be confirmed if Skt. prsthám 'back' belongs here. Mayrhofer (s.v.) doubts this on account of the vocalism, which in this view is not a drawback. The meaning is more likely to point in this direction; it is difficult to see how *pr-sth2-o- 'standing in front, leading' could become 'back'. Cf. also WH s.v. postis. On account of the Indian th one must perhaps in that case assume a laryngeal after the t. It is sufficiently known that lengthened o-vocalism in PIE could characterize the nominative. One may recall those ending in -ōn (Introduction, p. 12, λειμών), -ōr, -ōs (p. 202) and further ὀδών (with Skt. dánt-am dat-ás from PIE *dónt-m *dnt-ós), κυών (of which Lat. canis will continue a reduced grade, whatever may have been the exact development) and with $-s *\hat{g}h^z \delta m - s$ * $\hat{g}h^z m$ - δs 'earth' (p. 196) and * $p\delta d$ -s 'foot' ($\pi\omega\varsigma$).

Thus $\gamma\lambda\tilde{\omega}\sigma\sigma\alpha$ $\gamma\lambda\dot{\alpha}\sigma\sigma\alpha$ cannot be used for whatsoever argument with regard to the laryngeal theory.

4. Disyllabic Roots with i, u before the Laryngeal

As regards the disyllabic roots with \underline{i} , \underline{u} before the laryngeal one sometimes assumes that $i\hbar$, $u\hbar$ before consonant could become not only \overline{i} , \overline{u} but also $i\alpha$, $v\alpha$ (or ϵ or o instead of α). In the preceding section it proved that the development $R \ni (R \not H)$ is not a probable one. One would therefore expect that in the group i (or u) followed by laryngeal too the i (or u) was syllabic, and the laryngeal consonantal. On the other hand it appeared probable that $i\hbar_2$, $u\hbar_2$ at the end of the word became $j\alpha$, $F\alpha$. We shall therefore briefly discuss the cases that are believed to have had this development.

βρῖθω: βρίθω: βριαρός (II.). The same root is assumed in Skt. $gr\bar{\imath}$ - $sm\acute{a}$ - 'high summer' (enlargement of * g^uer - in βαρύς?). It is not necessary that βριαρός directly represents * $g^uri\hbar_2ros$. A recent formation, βρι(\hbar) + αρος, is conceivable, as is * $g^uri\hbar_2$ -ero-. Frisk's -ii-ii-(i.e. ii-ii) presupposes that i and \hbar could at the same time be vocalic, which is not probable. One might consider $e_i\hbar_2 > \iota$ -jα (for the structure * $g^ur_ei\hbar$ - cf. * g^ur_eui - that is suggested by Lat. gravis), but from $e_i\hbar_2$ one could also expect αjα (cf. Lejeune, $Trait\acute{e}$, p. 177 f., whose explanation is not historical, however).

πρίατο (α 430 ξ 115.452 ο 483, all πρίατο κτεάτεσσιν ἑοῖσιν |; other forms in Attic), which is cognate with Skt. $krīn\acute{a}ti$ (for $krĭn\acute{a}ti$) and OIr. crenaim (* $k^uri-n-e\hbar_2-mi$), could go back to * $k^uri\hbar_2-e-to$. Forms like ἐπριάμην πριαίμην πριάμενος must in that

case stand for *πριο- < * $k^u r i\hbar_2$ -o-. (Cf. Hom. ἔπτατο πταμένη — either a root-aorist (* $pt\hbar_2$ -), or a thematic aorist (* $pt\hbar_2$ -e-) — beside (more recent ?) ἐπιπτέσθαι (Δ 126), where the ε is therefore secondary for the α < \hbar_2 -e to be expected.) In general one expects with \hbar_2 -e/o > α/o generalization of the α or replacement by ε/o. Lejeune (with many predecessors) assumes * $k^u r^o y a_2$ -, in our notation * $k^u r_e i\hbar_2$ -; in that case πρίατο would be athematic.

κῖνέω κίνυμαι suggests *ki-n-eu-mi; the eu-enlargement is also found in *ki-eu-, σεύω and related forms. Here one would therefore expect short ι. True, in κῖνύμενος (Κ 120 Ξ 173 κ 556) and μετεκίαθε metrical lengthening is probable, but this does not seem an adequate explanation. The α in μετεκίαθε and κίατο ἐκινεῖτο Hsch. probably points to laryngeal. The element αθ may have developed from \hbar_2 -edh (cf. Schwyzer, p. 703,2); μετεκίαθε seems to be the oldest form (Λ 52.714 Π 685 Σ 532.581 α 22) with αθ (Homer still has only ἐέργαθεν (Ε 147 Λ 437 Ξ 36 Φ 599 φ 221). Thus κίατο may represent *kiħ₂-e-to (cf. πρίατο), and possibly *keiħ₂-, beside κίε with analogic ε. In that case ī could be analogic after ī < iħC (*kiħ-n- is inconceivable). Another explanation may be that the length derives from the thematized plural forms; for instance:

```
*di-n-\acute{e}u-mi \rightarrow *\deltaiveF\omega > *\deltaivé\omega \rightarrow \deltaīvé\omega (Aeol. ?\deltaivvημι) *di-n-u-m\acute{e}s \rightarrow *\deltaivF\omega > \deltaiv\omega (Aeol. ?\deltaivv\omega)
```

This view is presented by Heubeck, *Proc. Cambr. Coll. Myc. Stud.*, p. 233, n. 5. (If v_F in Aeolic became vv, δίννω (Hdn.) provides support for δίνω (Hes. *Op.* 598) and δίννημι (? Sappho, 1.11) is an indication that the forms ending in -έω/-ημι did in fact undergo the influence of those with -v_F-. However, this development is not certain, Schwyzer, p. 228, Lejeune, *Traité*, p. 137, n. 1.)

βία corresponds to Skt. $j(i)y\acute{a}$, i.e. $*g^u\dot{i}-e\hbar_2$ (or $*g^u\dot{i}h-e\hbar_2$?). Sanskrit has two presents, $jin\acute{a}ti < *g^ui-n-e\hbar-ti$ and $j\acute{a}yati < *g^ue\dot{i}h-eti$. If βινέω 'coire, futuere' belongs with this, one has the same problem as with κινέω. Ζάει ('βινεί Hsch.) $< *g^u\dot{i}e\hbar_2$ - as against βι- $< *g^u\dot{i}\hbar_2$ - (or $*g^u\dot{e}i\hbar_2$ -?).

βιῶναι βίοτος II. (βιοτή βίος Od.), ζώει II. For βίοτος βιοτή (cf. ἀρετή) a stem form $*g^uij\hbar_3$ - is assumed. The forms βιω- point to $*g^uij\hbar_3$ -, and those with ζω- to $*g^uij\hbar_3$ - (from a present $*g^u(_e)je\hbar_3$ -mi? Cf. p. 236f.). The full grade is found in βείομαι X 431, βέομαι O 194, βέη Π 852 $\sim \Omega$ 131 (Chantraine, Gr. Hom., pp. 115, 452, both with Add.), which perhaps goes back to a conjunctive $*g^uej\hbar_3$ -o-. Skt. $g\acute{a}ya$ - points to $*g^uoj\hbar$ -o-.

There are also indications of \hbar_1 . Thus Cretan has βίετος (of which, however, -ετος could be secondary, Schwyzer, p. 501).¹²¹ On the strength of the comparison with Av. hu- $\check{j}y\bar{a}$ -ti, $\check{v}\gamma\iota\check{\eta}\varsigma$ is derived as $*g^ui\check{\mu}$ -. And yet for this s-stem derivation from $*g^ui\hbar_1$ -es- seems more self-evident. The forms of $\zeta\check{\eta}v$, which Thurneysen considered to be analogic (IF, 38.147, in accordance with $v\check{\omega}$ $v\check{\eta}\varsigma$, $\sigma\mu\check{\omega}$ $\sigma\mu\check{\eta}\varsigma$), are traced back by Leroy to an \check{e} -stem ($Sprachgesch.\ u.\ Wortbed.$, p. 288). Possibly one ought to Here βίστος has been wrongly included in the group with 'o-Stufe der Wurzel'.

assume beside $*g^{u}$ įe \hbar_{3} - a variant $*g^{u}$ įe \hbar_{1} - (compare the interchange stated s.v. κινέω supra); this view is shared by Chantraine, $Morph.^{2}$, p. 13.

σάος. As Leumann has demonstrated (Μνήμης χάριν II (1957) 8-14, Kl. Schr., pp. 266-72) σῶος is not an old ablaut variant, but thematization of the σῶς contracted from σάος. In Homer one finds σόος (Il. 7 times, Od. 3 times), σῶς (N 773 \sim ε 305 \sim 28 o 42 \sim π 131; only X 332 in the first element of the dactylus, init.) σῶν (A 117, \sim Θ 246, where we find σόον, P 367). The conclusion that σόος is metrical diectasis for spoken σῶς from original σάος is an obvious one, whilst σῶς σῶν are either based on contraction of σάος, or are more recent forms (as is certain for X 332).

One must consequently start from σάος, i.e. *σαγος on account of Σαγοκλεγης etc. It has been connected with Skt. tavīti, 'to be strong, powerful'. The traditional formulation *tuə-uo- could be replaced by *tuh-uo-, but this form is phonetically improbable (a vocalic laryngeal between sonants), cf. p. 246. Moreover, the probably cognate ταΰς· μέγας, πολύς Hsch., ταΰσας· μεγαλύνας, πλεονάσας, which was interpreted as *təy-u-, cannot be connected in this way with *tyəyo-. For ταΰς one must probably start from $*t_e u \hbar_2 - u$, with the reduced grade that is frequent among u-stems, cf. βαρύς, Skt. gurú- from $*g^u_e ru$ -. For the root form $*t_e u\hbar$ - cf. Skt. tuviş-*teuħ-s-. For the Indian forms of this root see Kuiper, Act. Or., p. 20. It is therefore self-evident that for $\sigma \acute{\alpha} \circ \varsigma$ too one should start from an u-stem with reduced grade, but here, since σ points to $t\psi$, from $t\psi_e\hbar_2u$. It is probable that one has \hbar_2 here because otherwise the directly preceding reduction vowel would have been coloured to e or o. For the formation one can compare $*g^u r_e \mu$, Lat. gravis, beside $*g^u_e r u$; cf. $\tau \alpha \nu \alpha \delta \varsigma$ (p. 190 f.) and κραταιός. Now while $t_e u h_2 - u s > \tau \alpha F \iota \varsigma$ was preserved longer (because of the F), $*t\underline{u}_e\hbar_2$ - $us > *sa\hbar_2us$ was contracted at an early stage to * $\sigma\alpha\nu\varsigma$. However, this resulted in a very abnormal form, which is why this was thematized to *σάγος, like the later σῶς was replaced by σῶος. One thus has beside * $t_e \psi h_2 \cdot \dot{u}s >$ ταΰς on the other hand $*tu_e\hbar_2$ -us $> *sa\hbar_2$ us > *σαυς replaced by *σάρος > σᾶς,replaced by σῶος.

κύαμος is in my opinion non-IE (v. Frisk).

The conclusion from the cases discussed is that for πρίατο (κίατο) and βίοτος (βίετος) the representation referred to is possible. The question that arises when this is assumed is whether the basic form was just $i\hbar_2$ (for instance). If one uses the notation $ii\hbar_2$, the question remains how this group must be historically interpreted. Did $i\hbar_2$ spontaneously acquire after certain consonantal combinations a preceding vocalic element $(CCi\hbar_2 > CC^ii\hbar_2)$, possibly in sandhi, or must one allow for a reduced grade of $ei\hbar_2$, since beside (for instance) $er\hbar_2$ a group $ei\hbar_2$ is to be expected a priori? The comparison of βίοτος with κάματος leads one to expect a basic form $*g"_ei\hbar_3-t\acute{o}s$.

Risch, Worth. d. Hom. Spr., pp. 68 and 117, is of the opinion that κραταιός is built on the feminine κραταιή, which itself is said to stand for *κραταια, the old feminine of κρατύς, like Πλαταιαί from πλατύς. If the latter goes back to * $plth2\mu ih2$, this explanation is not possible for *κραταια. For this word did not have a laryngeal, as emerges from Skt. krátu- (which would have been *kráthu-if it had had -th-u-). However, for both a form ending in - $e\mu ih2$ is possible; Skt. prthivt is even more easily explained by * $plth2e\mu ih2$. Cf. also ταναός, p. 190 f.

If one asks oneself how this group would be represented in Greek, one might assume that $_{e\dot{i}}(\hbar),_{e\dot{\mu}}(\hbar)$ became $^{i}_{\dot{i}}(\hbar),_{u\dot{\mu}}(\hbar)$ back in the proto-language. The symbol $^{i},_{u}$ could then be used to indicate that this vocalic element became i,u in all languages. This development would not be dependent on the following laryngeal. If, however, the explanation given above of $\tau\alpha\ddot{v}\varsigma < {}^{*}t_{e}u\hbar_{2}$ - $u\dot{v}$ s is correct, then a development $_{e\dot{i}}u\hbar_{2} > \alpha_{F}$ would emerge from it. One comes up here against the general problem of $_{e\dot{i}}$ before vowel. This group is rare and the problem cannot be further dealt with. 123

(For $\pi piato < *k^u rij\hbar_2 - to/k^u r_e j\hbar_2 - to$ compare ovoµaı, if in fact it is from $*_e n\hbar_3 - toi$, p. 231.)

5. Presents Ending in -nēmi and -nōmi

Beside the nasal presents ending in $-n\bar{a}mi < -n-e\hbar_2-mi$ one would also expect a priori such nasal presents ending in $-n\bar{e}mi < -n-e\hbar_1-mi$ and $-n\bar{o}mi < -n-e\hbar_3-mi$. Among others Meillet has drawn attention to this, $M\acute{e}l$. Vendryes, pp. 275-85, describing the absence of the last two categories as a problem for De Saussure's theory. This absence would indeed be strange, but this is no greater problem for the laryngeal theory than for the old interpretation (as he also admits on p. 284). The conclusion would only have been that $n\bar{e}$ - and $n\bar{o}$ -presents did not occur, for unknown reasons, or — and this still holds good — that they were superseded in the historical languages. Disyllabic roots ending in \hbar_1 and \hbar_3 seem to have been not as frequent as those ending in \hbar_2 , which may explain why these formations were eliminated. It has been wrongly thought that in the article mentioned Meillet had proved that presents ending in $-n\bar{e}mi$ did not exist, cf. for instance Pedersen, Cinq. $d\acute{e}cl$., p. 63 (which is surprising in this book). He merely established that no convincing example of $-n\bar{e}mi$ or $-n\bar{o}mi$ could be given.

It was stated above that Greek has a few verbs that point to an original $-n\bar{e}mi$. The original system of 'to throw' was βάλλω - *εδελον (from $*e-g^ul\hbar_1-om$). The present βάλλω cannot but go back to $*g^ul-n-e\hbar_1-mi$, since a $i\bar{o}$ -present is out of the question ($*g^ul\hbar_1-i\bar{o}$ gives *βλημω, and a stem form βαλ- did not exist elsewhere). For λλ see Lejeune, Traite, p. 133 (cf. δλλυμι). It cannot be doubted here that the root ended in \hbar_1 . Wackernagel-Debrunner, KZ, 67 (1942), 159 f. (cf. Schwyzer, p. 693, with n. 9),

One might ask oneself whether $_{e}i$ (ii) became i before consonant, which would offer a solution for certain ablaut problems (e.g. *pi-, the zero grade of $*p\delta(i)$ - $< *pe\hbar_3(i)$ -, from $*p\hbar_3ei$ -, $*ph_3ij$ -; thus also $\varepsilon\pi$ 100 from *e- $p\hbar_3ij$ 00. One sees the similarity — and the dissimilarity — with the explanation of the old school from σi , σi 00 (which for instance is still defended by Hendriksen, *Unters.*, p. 94); this would be $\hbar i$ in the notation of the laryngeal theory, which is a highly improbable structure. Kuryłowicz, *Etudes*, p. 41, starts from $_{e}\hbar i$; however, for this one is more inclined to expect the same development as of full grade $e\hbar i$.

Lejeune's assumption that we are concerned here with a 'traitement récent' seems correct, but incorrect is the idea that these forms did not develop until after 'grec commun'; a much more likely cause is that these groups were *longer preserved* here than elsewhere (which may also be suggested by π ίλναμαι) on the analogy of the type σ κίδναμαι etc., where the n did not follow a l.

assume that *βάλλημι still survives in βαλλήσω and βαλλητύς. However, the first form occurs only in Ar. V. 222 and 1491, while Homer has βαλέω (Θ, Od.; βαλῶ P 451). A future ending in -νησω of verbs ending in -νημι < -nāmi is unknown. Most futures ending in -ησω have been derived from the aorist stem (Schwyzer, p. 782), but cf. τυπτήσειν (Ar.), παιήσειν (Ar.), ὼθήσειν (S., E., Ar.) and εἰδήσειν (Hom.). One is therefore probably concerned with a recent form here. For βαλλητύς see Frisk s.v. However, it is important that, according to Pedersen, Celtic also has -ball-with ll from ln (VKG, II (1913), 459).

The form σ κήλει'(ε) Ψ 191 seems built on * σ κάλλω; beside σ κέλλω this could point to an original * σ κάλλω — * $\tilde{\epsilon}$ σκελον, of which * σ κάλλω may be based on * sk_{l}^{l} -n- $e\hbar_{l}$ -mi (cf. Chantraine, Morph.², p. 6, n. 1).

For τάμνω ἔτεμον a nasal present cannot be doubted, any more than for κάμνω. Only Cardona, Lg, 36 (1960), 502-7, believes that these two forms are Greek vopresents, built on the aorist stem (ἔκαμον ἔβαλον); however, the latter is impossible with a system τάμνω ἔτεμον. It cannot be seen that this explanation is more probable than that of thematization of *καμναμι, which offers a historical explanation for the νω-present. His argument that these two verbs are the only disyllabic roots that have a thematic agrist (to which βάλλω ξβαλον should be added), ceases to apply insofar as no *πόρνω is built on ἔπορον etc. (θάρνυμι — ἔθορον also indicates an old npresent, which in any case cannot have been built on the agrist). His parallel $\pi i \nu \omega$ is based on Leumann's reconstruction of the old agrist of this root, of the correctness of which I am not convinced; see p. 175 ff. Cardona is of the opinion that a 3 pl. -n-ħ-onti (Schwyzer, p. 663) is improbable, since the ending of the 3 pl. was probably just -enti (beside -nti), despite Meillet, Intr.8, p. 228, which is mainly based on Hittite (e.g. kunanzi beside kuemi kuesi kuenzi), for after all Skt. -anti may also be -enti. However, in Hittite -anzi is the general ending, and -enzi occurs only rarely, as a less frequent variant form (Sturtevant, Comp. Gr., p. 140). It is then probable that we find in Hittite the extension of PIE -onti — whatever its origin — at the expense of -enti, which may also have occurred elsewhere. Kuiper's doubt about *ταμνημι (meant as -nāmi), Nasalpr., p. 68, n. 4, is withdrawn by him, ibid., p. 231 (Nachträge): beside MIr. tamnaim one has Lith. tinù tìnti and ORuss. thnu tjati. Aeol. τόμοντες will go back to * $\tau o \mu \nu \eta \mu \iota$ and thus confirm *t m-n- $e \hbar_1$ - $m \iota$ (see p. 223).

Another possible indication is the form πίτνω 'to fall', which seems to go back to *πίτνημι, especially if the form πιτνῶ (= πιτνέω) is reliable; cf. p. 240.

Reference was made above to $\pi \dot{\alpha} \lambda \lambda \omega < *pl-n-e\hbar_1 mi$ (p. 237); this interpretation remains extremely uncertain, however.

Skt. $prn\acute{a}ti$ 'to fill' cannot simply be used as proof of *pl-n- $e\hbar_1$ -mi: ¹²⁵ the form prnati seems older in the Rigveda. ¹²⁶ But in that case the question remains of the origin of

This is done by Chantraine, *Morph.*², p. 14. It shows that this author expects presents in -nēmi. Kuiper, *Museum*, 57 (1952), 197: one finds 74% of the cases of *pṛṇati* in the family books, but not a single one in X, and only 40% of *pṛṇāti*, while it occurs 13 times in X. Avestan, too, suggests that *pṛṇati* was the old form.

pṛṇati, which can nevertheless best be explained as thematization of * $p\bar{l}$ - $n-\hbar_1$ -(e/o-) and in that case would point indirectly to * $p\bar{l}$ - $n-\hbar_1$ -mi. So old a thematization of a nasal present is striking, and it may be asked whether it is coincidental that it occurs precisely from this stem. It might then be assumed that the thematic form arose to avoid a present ending in $-n\bar{e}mi$, i.e. at a time when \bar{e} ($-n\bar{e}mi$) and \bar{a} ($-n\bar{a}mi$) were still separate in Indo-Iranian. Later -nati, which then stood alone, was replaced by - $n\bar{a}ti$. One perhaps finds a parallel for the occurrence side by side of a nasal present and a reduplicated present (π (μ π λ η μ) in π (π τ σ): π (τ τ σ 0). However, it is not certain that the nasal present stems from PIE; it may be an Indo-Iranian innovation (for * $piple\hbar_1mi$?). See Add.

As ἱερός points to *isħ₁-, Skt. iṣṇāti may go back to *is-n-eħ₁-ti.

Nor was there any indication of a present with -nomi. "Ομνυμι will be a Greek innovation as against the athematic present in Skt. ámīti. And yet one wonders what the starting-point must have been for these forms. From the athematic declension one would be most inclined to expect a thematic one. For στόρνυμι Cowgill, p. 154ff., gives consideration to an original system *σταρνωμι *σταρνομεν (which according to Cowgill again stands for *σταρναμεν $< *str-n-\hbar_3-)$ *σταρνοντι (*- $n-\hbar_3$ -enti), of which vo before labial changed into vo, after which, on the basis of *σταρνυμεν -μαι -μενος, a present ending in -νυμι was formed. It seems to me highly dubious that this phonetic law (which is founded on ὄνυμα γυμνός νύξ ὄνυξ) can in itself have brought about the change into another type of declension. In any case this is inadequate proof of a present ending in -nomi. However, it becomes highly probable through the comparison of OIr. sernaid, which may represent both -nāti and -nōti, with Lat. sterno, which will go back to an old nasal present, while PIE *strneumi would lead one to expect a form *sternuo. For the view of Puhvel, Laryngeals and the Indo-European Verb, I may refer to the discussion by Cowgill, Lg, 39 (1963), 248-70; the idea (the third, labio-velar laryngeal A^w becomes u back in PIE) is based on too unreliable an interpretation of a small number of facts and requires a series of arbitrary assumptions.

After the above had been written, I saw the article by Heubeck, *Proc. Cambr. Coll. Myc. Stud.*, 1966, pp. 229-38, in which possibly a clearer indication is found. He is of the opinion that Myc. *qeqinomeno qeqinoto* (' $g^{\mu}e-g^{\mu}in\bar{o}menos\ g^{\mu}eg^{\mu}in\bar{o}toi$ ') is cognate with Hom. $\delta\iota\nu\omega\tau\delta\varsigma$, but that this group is not cognate with $\delta\iota\nu\dot{\epsilon}\omega$. Like Richardson, he derives the verb * $g^{\mu}ino\bar{o}$ from the root * $g^{\mu}ie\bar{h}_3$ - and assumes a development of meaning 'to make alive, vivify > to decorate (by living figures of nature)'. This connection of * $g^{\mu}ie\bar{h}_3$ - with painting is in my opinion confirmed by the classical Greek term for 'to paint', $\zeta\omega\gamma\rho\dot{\alpha}\omega\iota\nu$ (since Hdt.). The verb * $g^{\mu}ino\bar{o}$ could have been derived from * $g^{\mu}ih_3$ -nos > * $g^{\mu}inos$ (cf. Lat. $v\bar{v}vus$ from * $g^{\mu}ih_3$ -uos etc.), but (with Forssman) he considers the possibility of a verb * $g^{\mu}i-n-eh_3-mi$. The length of the i would then have to be analogic. For this one may envisage * $g^{\mu}ih_3$ -> * $g^{\mu}\bar{i}$ -, which, however, cannot be pointed to in Greek, but also compare $\kappa\bar{i}\nu\dot{\epsilon}\omega$, $\beta\bar{i}\nu\dot{\epsilon}\omega$, $\delta\bar{i}\nu\dot{\epsilon}\omega$ (p. 248); ? $\pi\dot{i}\nu\omega$ (p. 175). Less probable is lengthening in the form * $g^{\mu}i-n-h_3-\bar{o}$ (compare $\gamma\dot{\epsilon}\nu\sigma\varsigma < *\hat{g}enh_1os$,

p. 180). For the rest it is not, of course, certain that the i in Mycenaean was already long.

However, up to now this is the only form for which a present ending in $-n\bar{o}mi$ can be demonstrated with a somewhat greater degree of probability.

See App. 3.

XII. INTERCONSONANTAL LARYNGEAL REPRESENTED BY ZERO

The investigation has shown that in some cases the laryngeal was not vocalized where one would expect. It is in itself not strange that the consonantal laryngeal between consonants (and at the beginning of the word before consonant) disappears, as notably in Iranian, see Introduction, p. 9. However, the question is what led to this consonantal laryngeal not being vocalized, as was usually the case. An answer to this does not yet seem possible. However, it may be important to place together the cases that seem to have this phenomenon. They may be divided into three groups.

I Laryngeal at the beginning of the word.

νώροπι, νωρεῖ : ἀνήρ (p. 75 f.)

λοιγός : ὀλίγος (ibid.)

μοιχός : ὀμείχω (ibid.)

γίκατι: ἐγίκοσι (p. 62)

ύγιής: ἐυ- (p. 53)

II Laryngeal after s-.

μέλδομαι if from *sh₂meld- (p. 85 ff.)

νεῦρον if from *sħn- (ibid.)

ελη, γέλα: είλη (ibid.)

μέρδει : ἀμέρδει (ibid.)

ἕρση: ἐέρση (ibid.)

III Laryngeal in the middle of the word.

tρός $< *ish_1 r \acute{o}s$ (p. 183 f.)

*τολμα from * $tol\hbar_2m$ (p. 238 f.)

ὀργή from *μοτħg- (ibid.)

ὀρθός from *worhdhwo- (ibid.)

πόρνη from *por h_2 nā (ibid.)

πότμος: ποταμός (ibid.)

μέζω Myc. mezoa2 from *meĝħ2iosħ2

άνται: άνεμος

ἔντεα from *senħ1-t-

Some remarks on these forms.

If the first element of $\hat{v}\gamma \hat{v}\eta \varsigma$ was * $\hbar_1 su$ -, there is no trace of the laryngeal in this word. However, this basic form is not certain. Perhaps composition has also exerted an influence here (p. 242 ff.).

The remaining forms of the first group are discussed on pp. 75 ff. and those of the second on pp. 85 ff.

In $\mu \& \zeta \omega$ the laryngeal seems to have disappeared; Skt. mahīyas- indicates that this belonged in the original form of the comparative. There too it could disappear, as emerges from (instr.) mahnā $< *me\hat{g}\hbar_2-mn$ - (Introduction, p. 10).

ἄνται· ἄνεμοι, ἀντάς· πνοάς Hsch. will not have to be changed into ἀῆται, since it is given twice in this form. It may therefore go back to $\hbar_2 en\hbar_1$ -t-. Perhaps ἄσθμα also belongs with this in Greek, if it developed from *αν-σ-θμα. Compare Av. antya ($\bar{a} + ainti$) as against (Av.) aini-van-, and ON andi 'breath, spirit'.

ἔντεα, like ἔναρα, is connected by some with ἄνυμι, of which the stem was $*sen\hbar_1$. This etymology is, of course, no more than one possibility, but this root is most probably found in αὐθέντης and συνέντης συνεργός Hsch. Here a non-enlarged root *sen- seems a reasonable supposition, since a relation with the stem of the verb cannot be seen in Greek.

1. THE SO-CALLED APOCOPE

A case of unvocalized laryngeal may perhaps be found in the so-called 'apocope' of the prepositions (Schwyzer, p. 406, Schwyzer-Debrunner, pp. 436-533, Chantraine, *Gr. Hom.*, p. 87 f., Lejeune, *Traité*, p. 193 f., Buck, *Gr. Diall.*, § 95; the last source gives the clearest review of the material on which the following is based).

Apocope is rare in Ionic-Attic, but general in all other dialects. This mainly concerns the forms ἄν and πάρ, while κάτ and πότ also occur, the latter in West Greek usually before dental, often with shortening of the double consonant (or is this only a graphic problem? κὰ τόν, πὸ τόν); especially in Lesbian, Boeotian and Thessalian, but also elsewhere one finds (beside κατ) καδ κακ καγ καπ καβ καρ καλ καμ καν; striking is καυάξαις Hes. *Op.* 666 (cf. Hom. αὐερύω, Arg. ἀγρετευε < ἀν-γ-, Buck, *Gr. Diall.*, § 55b, cf. Arc. συγοικία). For πεδά Arcadian has πέ. Πέρ is found in Lesbian, Thessalian, Delphian and in proper names in Locrian, Laconian, Messenian and Cretan; Elean has the form πάρ here. The forms ἄπ ὕπ(ὕπ) ἔπ occur almost exclusively in Thessalian (for the rest only Lesb. ἀπ πατέρων Alc., Hom. ἀππέμψει ο 83, ὑββάλλειν Τ 80).

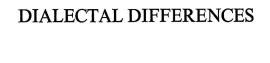
 any case πότ can have developed under the influence of κάτ. If this is correct, the phenomenon would have started from ἀνά παρά κατά.

The apocope has not been convincingly explained. Loss of vowel, however conditioned, is very rare in Greek. The attempt by Szemerényi, Syncope, to demonstrate that syncope was not rare in Greek, tends rather to show the opposite. Many of his few examples must be explained differently, while others cannot be afforded much conclusive force. Analogic expansion of the antevocalic form is improbable (as also stated by Lejeune, $Trait\acute{e}$, p. 275, n. 4), since it does not then become clear why only a few prepositions are concerned; in any case, such a development cannot be indicated. Origin in the conditioned shortening ($\kappa\acute{a}\tau$ before τ , ${\ddot{a}\pi}$ before π etc.), as Lejeune assumes (ibid., p. 280, n. 1, at least for $\kappa\acute{a}\tau$ and ${\ddot{a}\pi}\,{\ddot{e}\pi}$), which in that case would itself have to be ascribed to a kind of haplology, cannot, even when right for the cases mentioned, be regarded as the origin of the whole phenomenon.

If it is assumed that the phenomenon started from ἀνά παρά κατά, the origin could lie in the -α, of which the origin is not known for certain (see p. 153 and cf. p. 208, n. 103, on ἀνά and p. 208 on ἁμά). If this α developed from a PIE consonantal laryngeal which was vocalized in Greek, one could regard the forms affected by apocope as ones of which the - \hbar_2 was not vocalized. With Aeol. ἷρος the fact tallies that apocope went the furthest in Aeolic. That $\pi\epsilon\delta\dot{\alpha}$, otherwise than in Arc. $\pi\dot{\epsilon}$, was not affected by apocope might suggest that the α was of different origin, e.g. an accusative *ped-m (Schwyzer, p. 622).

The question then arises in which circumstances the laryngeal was vocalized. It seems that Ionic-Attic went the furthest in this. Cf. Schwyzer-Debrunner, p. 491,9: "ist die Form der ältern nicht ion.-att. Inschriften (erst seit der Koine auch παρά; παράχρημα schon in Epid. um 320^a ...)."

However, it is impossible for me further to demonstrate the explanation proposed here. The idea is therefore given only as a hypothesis.



		•	
			•
			•
			•
			•
			•
			•
			•

DIALECTAL DIFFERENCES

The question whether the various dialects went their own ways in the development of the laryngeals, which would therefore show that the laryngeals were preserved down to the individual Greek dialects, should be further examined.

This examination, which is based on the indices of Bechtel, Buck and Scherer-Thumb, *Handbuch der Griechischen Dialekte*, II², 1959, has not yielded any clear indications of dialectal differences. In general the developments discussed above are found in all dialects. For some cases one would like to consider the possibility of a separate development, but the material is too scanty and too diverse to allow of so far-reaching a conclusion.

In the following what may be of importance here will be discussed, first by dialect, without reference to Ionic and Attic, since all data on these have been incorporated above, and then a number of etyma which it seemed better to discuss in themselves.

Figures without further designation in this chapter refer to Bechtel.

1. MYCENAEAN

All data from Mycenaean are in accordance with the rules found above. The principal words of importance may be mentioned here. They are given in the classical Greek form, after Chadwick-Baumbach, *Glotta*, 41 (1963), 157-270, where the individual forms are given.

ἀγείρω ?ἀείρω ἀέξω ἀλείφω ἀλέξω (ἀλεκτρυών) ἀνήρ, ἐλεύθερος ἐρυθρός ἐυ-, ἀνᾱ- (onato) ὄνυξ ὄφελος ὀφείλω ?ὀφρῦς; ζέφυρος (zepu₂ro); ἀλκή ἀργός; ἐρῆμος (eremo); θυγάτηρ, ἄνεμος ἐρέτης ἱερός, ἄρουρα *λεγοτροχόος δίδοτο -δοτος; ταλασία *χάραδρος; τέμενος (-τομος) *ταμιεύς; ?*λεχεστρωτηριον (reketoroterijo); στρατός ($tara_{[2]}to$); $mezoa_2$.

2. ARCADO-CYPRIAN

The Arcado-Cyprian material is very scanty.

Laryngeal at the beginning of the word is found in Arc. δφέλλονσι (1.334 f.), in the middle in Arc. δρκομοτας (1.393), Cypr. ὀμομοκον (1.434), the latter form with Attic reduplication.

Both dialects have the stem γρε- (1.391,403); in Cyprian one finds κασιγνέτος. Nothing points to aberrant developments.

3. AEOLIC

Laryngeal at the beginning of the word is found in ὀφέλλω (ὀφείλω), ὄνοιρος (Att. ὄνειρος), Boeot. ὀφρυγνῷ (from ὀφρῦς 1,307), Thess. ?'Ολιζών (1.209; Hom. B 717).

One finds laryngeal in the middle of the word in ouo- (1.41, Lesb.).

For ἴρος (1.56, Lesb.) see p. 184 f.

Forms like χόλαισι are probably not of importance to our problem; cf. Bechtel 1.25 (χαλάσσομεν, Alc. LP D 12.10). 'Ov for ἀν(ά) also seems secondary (1.24f.: Hom. αὐερύω < *ἀν-ϝερύω). In general Aeol. (and Arc.-Cypr.) o for α elsewhere is not clear, Buck, *Gr. Diall.*, § 5 and 6.

The only thing that points to a separate development is therefore foc.

4. WEST GREEK

In general the Doric forms give the impression that here the same development has taken place as in Ionic-Attic.

As regards laryngeal after vocalic sonant, one could point to $\pi p \tilde{\alpha} \tau o \varsigma$. As we have seen (p. 214 f.), there is, however, no compelling reason to start from * $p_l \hbar_3 tos$, so that this form cannot be used as an argument. However, a more difficult case is $\tau \epsilon \vartheta \rho \tilde{\alpha} \sigma \vartheta \alpha \iota$, which seems cognate with $\vartheta \rho \dot{\omega} \sigma \kappa \omega$; p. 216. However, there is no certainty that the word is Doric. For the development of $l \hbar_1$ one can point to general Doric Frq-, $\kappa \lambda \eta$ -.

For the rest, only the vocalization of the laryngeal requires discussion. For laryngeal at the beginning of the word the following forms point to the expected development: ὀφείλω (passim), ὄρεγμα (Heracl. 'measure of land', cf. ὀρόγυια, Buck, p. 373), ὀλισθράζω (Corinth., 2.286), ἑκατ-ώρυγος (Megar. 2.203); ἐλούθερος (Cret., Buck, § 33a; late Delph. ἐλαύθερος, l.c.), ἐπελευσεῖ (ἐπέλευσαν Cret., Buck, § 162.15), ἐρευνίοντες (Cret., 2.673). That these forms are small in number is probably a result of the fact that the above handbooks mainly state the forms differing from Ionic-Attic; the list could probably be extended by further research.

However, one finds here a few forms with α where the other dialects have ε or o. The clearest is Cret. ἄναιρος ἄναρ as against ὄνειρος ὄναρ, Aeol. ὄνοιρος; see p. 46. Comparable is Ἀνασίφορον Phoc. (2.108), beside which, however, 'Ονασι- occurs. Thus Cretan has ἄερσα as against ἕερσα elsewhere, p. 64. For αὔληρα see p. 64 (and for εὖλάκα see p. 40 s.v. ἄλοξ).

Attic reduplication is found in ὀμωμόκαμες Cret., 2.755.

For the vocalization of the laryngeal in the middle of the word the widespread stem òμo- is important. The form ἄρουρα cannot be used very well, since the exact basic form is not known (p. 231).

As the exact explanation of β ieτος (Cret., 2.722): β ioτος is not known (cf. also Buck, p. 167), a conclusion regarding dialectal development of the laryngeal is not possible; if the ϵ goes back to a vocalized \hbar_1 , this shows the expected development also for Cretan.

However, $i\alpha\rho\delta\varsigma$ remains indisputable (very frequent, can be pointed to in practically all dialects). The form can hardly be explained by a transition $\epsilon > \alpha$ (usually with ρ), for this is not found in all dialects, nor is it constant (Buck, § 12 and 13.1). Aeol. $iplice{$

The form ἀράω, with ἀρα- instead of ἀρο- elsewhere, would correspond to ἱαρός: Heracl. ἀράσοντι (2.417), Cret. ἄρατρον and Ἀράτυος, Arg. Πραράτιος (2.474, 515; from προ-αρα- cf. Att. Προηρόσια). However, here one can point to comparable interchanges in the present system (Buck § 161.5), ἀξιάω (Lesb.): ἀξιόω, κοινάω (Thess., Dor.): κοινόω, where there can be no question of a laryngeal being a cause of the difference.

It is difficult to draw a conclusion from this survey. Most of the forms stated among which the development of $r\hbar_1$ ($F\rho\eta$ - $\kappa\lambda\eta$ -) is very important — display the same development as Ionic-Attic. And yet the exceptions may be of great importance. In this connection two things are striking. In the first place ίαρός is a word that belongs to cultic language, in which archaisms are often preserved. In the second place a relatively large number (but with such scanty material working with percentages may of course be deceptive) of the exceptions occur on Crete (ἄναιρος ἄναρ, ἄερσα; άρα- and ἱαρός also on Crete; βίετος). This could be a consequence of the fact that this island (partly through its location) has less intensive contact with the rest of the Greek world (while it is also large enough to preserve a character of its own). On the other hand, one does not easily assume that all forms displaying the East Greek development ought to be ascribed to the influence of other dialects; the whole region of West Greek, as is known, was originally inhabited by tribes speaking East Greek. The conclusion that may be given here seems to me to be the following: the scanty material cannot be taken without more ado as proof of a West Greek development $\hbar_1 \, \hbar_3 > \alpha$; and yet serious allowance must be made for the possibility of this; a more detailed examination of the oldest material attainable — notably in Crete — is necessary.

The following consideration is of importance to the question whether the laryngeals did not disappear until after the division into dialects. On p. 205 it could not be established whether the development (for instance) $mh_2 > mah_2$ took place before or after the development $m > \alpha$. If the first transition took place after the second or also, what perhaps is more probable, both occurred simultaneously, this may not have happened until the separate dialects, as emerges from $m > \alpha \rho(\rho \alpha)$ as against $m > \alpha \rho(\rho \alpha)$ elsewhere.

5. MISCELLANEOUS

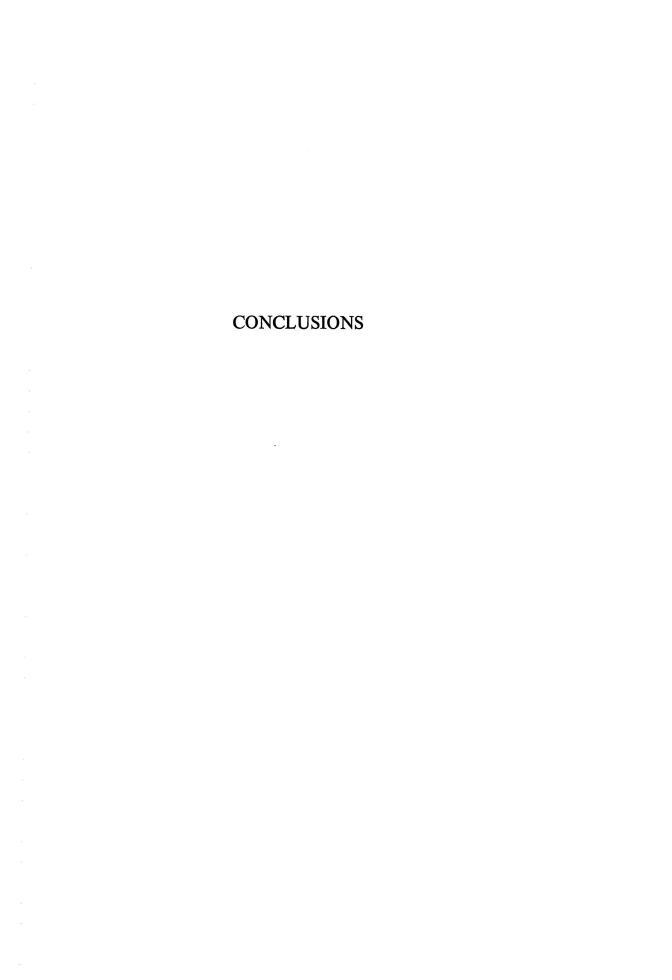
A word that could point to different developments is $\delta \tilde{\eta} \lambda o \zeta$. The Hesychius forms with $\delta \iota \alpha$ - (dialectal for $\delta \epsilon \alpha$ -) and the connection with $\delta \dot{\epsilon} \alpha \tau o$ etc. point to an original

*δεαλος, see Frisk. This form certainly belongs to East Greek (Hom. ἀρίζηλος Il., ἔκδηλος Ε 2, δῆλος υ 333, Arc. (conj.) δέατοι). With Skt. dī- (Kuiper, Die Sprache, p. 7.24) this points to * $deih_2$ -. With the latter word one usually connects K 466 δέελος and εὐδείελος, which, with metrical lengthening, is said to stand for *ἐυ-δεελος The idea that an old suffix variant lo: elo forms the basis of this is not plausible, and moreover both * $dei\hbar_2lo$ - and * $dei\hbar_2elo$ - would phonetically have given * δ εαλο-. Here one could only envisage a Greek replacement of αλο by ελο (just as one finds ερο beside apo). In my opinion a dialectally different development should not be envisaged here, since the two forms evidently belong to the same linguistic region. The question thus arises whether the connection is correct. For εὐδείελος the meaning is by no means certain. Moreover, connection with the Mycenaean place name eudewero (PY Ab 02+, Docs. 148, 159; cf. Strabo, p. 415 Εὐδείελος as another place name for Aspledon) is self-evident. Δείελος 'evening' (v. ap. Frisk) has also been envisaged. The etymology of the latter word is unknown; the explanation *deu-s-(Frisk s.v.) would be supported by Mycenaean. The form εὐδείελος is in my opinion too unreliable to be used as an argument. I cannot explain δέελος, but one may not attach too much value to this Homeric hapax (in the Doloneia; is it a diektasis of δῆλος?).

If the connection of ἠρέμα (Pl.) with W. araf 'quiet' and Av. airime, armaē-šad-(Bartholomae, IF 7 (1897) 69 f.), Choresmian arma- 'to leave alone' (Henning, Zoroaster, p. 45) is correct, we have here a disyllabic root (* \hbar_2 er \hbar_1 -m-). The Hesychius glosses ἄραμεν μένειν, ἀράμεναι ἡσυχάζειν would in that case point to α as against ε. The origin of the forms with α is unknown. However, the ending -μεναι suggests Lesbian. It therefore does not seem permissible to attribute the α to a West Greek dialect. The η of ἠρέμα is incidentally also unexplained. For an entirely different interpretation see Frisk s.v. (p. 193).

Miss J. Narten, IIJ, 10, p. 247 ff., links the Indo-Iranian words with ἐρωή, OHG rouwā. OHG rāwā points here to ē, the Greek ἐ- to \hbar_1 -, so that one arrives at a basic form * $\hbar_1 re\hbar_1$ -; in that case ἡρέμα can be based only on * $\hbar_1 \bar{e}r\hbar_1 m$ -. Ved. $\bar{\iota}rm\dot{a}$, for which Miss Narten assumes the meaning 'ruhig, still auf der Stelle verbleibend', may go back to the same basic form as ἐρῆμος (p. 36), * $\hbar_1 r \bar{\mu}_1 m$ -. The development of the meaning (> 'desolate, lonely') does not seem impossible to me; cf. Chorasmian arma- 'to leave alone'. It then becomes less probable that the Greek forms with double α come from the same root, although the similarity in meaning (both μένειν and ἡσυχάζειν) is striking. Finally, it may be remarked that the words mentioned in Frisk (cf. p. 193) may have the same root with a different enlargement: $\hbar_1 r$ -em- beside $\hbar_1 r$ -e \hbar_1 - (with $\hbar_1 r$ -em- \hbar_2 - and $\hbar_1 r$ -e \hbar_1 -m-?). Much therefore remains uncertain here.

Another form with unexplained α occurs of the stem ὀνο- (ὄνομαι ὀνόσσομαι, ἀνοσάμην Hom.; ὀνοστός I 164, ὀνοτός Pi.; ὀνοτάζω Hes.). P 25 ἄνατο (preceded by ἀπόνηθ') and ὄναται ἀτιμάζεται, μέμφεται Hsch. are unclear. Chantraine's suggestion (*Gr. Hom.*, p. 295) that ἄνατο could be a sigmatic aorist (*ἀν-σα-) thus presumes a form created on a stem ὀν-. Even more disputed is the form οὕνεσθ' Ω 241.





CONCLUSIONS

A. CONCLUSIONS FOR THE LARYNGEAL THEORY

The principal problems of the laryngeal theory, as outlined in the Introduction, are: the number of laryngeals, the question of the positions in which the laryngeals were preserved down to the separate languages and the question when consonantal and when vocalic laryngeal must be assumed for the proto-language.

1. THE NUMBER OF LARYNGEALS

The existence of two laryngeals was regarded as an established fact. Various facts in Greek point to a third, o-colouring laryngeal. In the first place the so-called 'prothetic vowel'. It emerged that here è-, à- and ò- occur side by side and that they developed from vocalization of a laryngeal without the environment exerting influence on the timbre of the vowel that developed, so that three laryngeals differing in 'colour' must be assumed. The same development was encountered in the first syllable of Attic reduplication. Between consonants, too, one finds o, which may have developed from laryngeal. Here compelling proof was not possible, but in connection with the preceding and the following this view seems the correct one. In the disyllabic roots the type $TeRh_3$ -C is poorly represented: here one finds only forms with $ToR\varepsilon$, which seem to have to be ascribed to metathesis (one expects $T \in Ro$). There are also a few indications of h_3 before vowel at the beginning of the word. However, the most important is the group $R\hbar_3$. Before vowel this proved to have become oR, whereby the colour of the vowel must be ascribed to the laryngeal. Thus the group $R\omega$ must also go back to Rh_3 in many cases. The latter assumption is supported by the parallelism of the forms with Rh_1 . When these indications are considered the assumption of a third, o-colouring laryngeal (beside h_1 and h_2) becomes inescapable.

Greek gives no hint of a fourth laryngeal. Of course, in practically every chapter unexplained forms remain, but that need not be surprising. The laryngeal theory enables us to solve various questions that have so far remained unanswered, but even after this there will doubtless be a remnant for which we cannot yet give an answer, and perhaps will never be able to either, since we simply do not have enough data. Indo-European linguistics is largely based on the exceptional forms of the various languages that have been preserved as archaisms; however, if these forms become so

exceptional that we have too few of them to discover a pattern of regularity, they stay unexplained. However, this material is of too varied a nature and too small a size for it to be capable of solution by assuming a fourth laryngeal.

2. THE LARYNGEAL PRESERVED DOWN TO THE SEPARATE LANGUAGES

The Introduction mentioned the fact that the laryngeals were preserved down to the separate languages. However, the question is whether this was the case in all positions A summary will now be given of what the Greek material points to.

As the 'prothetic vowel' is based on a Greek development, the laryngeal must have been preserved down to Greek at the beginning of the word before consonant. However, it cannot be demonstrated that the laryngeal was, on the other hand, also preserved before vowel. This was the case before sonant if ὄνητο goes back to * $h_{3}\eta h_{2}to$; * $h_{2}rgr \acute{o}s$ is meaningless, and the same formation with another laryngeal cannot be demonstrated for certain. (If, as assumed on p. 132, the colour of the vowel was influenced by the laryngeal in that case, this must still have been present in Greek.) At the end of the word laryngeal after i and u must have been preserved down to Greek if Greek here, unlike all other languages, vocalized the laryngeal. After e too the laryngeal will doubtless have been preserved until shortly before historical time. On the strength of the Greek material alone it is not impossible that the vocative had lost the laryngeal back in the proto-language $(-e\hbar_2 > -\check{a})$, but for instance the shortening in pausa in Indian (p. 145) suggests that the laryngeal after vowel must have been preserved until shortly before historical time. After consonant the only clear case is really the plural of the neuter. Greek does not contain any indication here that the laryngeal was only secondarily vocalized, but in view of Avestan this must have been the case. The only instance I know of laryngeal after sonant is the very uncertain νέκταρ (p. 160 f.).

The possibilities in the middle of the word are greater. I see no indication that the laryngeal in the positions after vowel before consonant (VHC), between vowels (VHV) and after consonant before vowel (CHV) was preserved down to Greek (for the last two cases this is probable on the strength of Indo-Iranian, see Introduction, p. 9f., point 6b and a). However, the laryngeal before vowel after vocalic sonant (RHV) must have been preserved in Greek, in view of the laryngeal umlaut. Interconsonantally $\hbar_1 > \epsilon \hbar_3 > 0$ indicates that the three laryngeals preserved their 'colour' down to Greek; since the other languages have a here (Ind.-Ir. i), these vowels must first have developed in the separate languages from the laryngeal. Before consonant after vocalic sonant (RHC) the laryngeal must have caused the developments $R\eta R\bar{\alpha} R\omega$, developments which cannot have taken place until Greek.

It can therefore be demonstrated that the laryngeal both at the beginning of the word (HC, ?HR), and at the end (i/uH) and in the middle (RHV, RHC, CHC) was preserved down to Greek. It is perhaps worth while combining these data with those of Indo-Iranian and Hittite.

(Gr. etc. means preserved down to Greek etc.)

HC-	Gr., Arm. ¹ , IndIr. ² , Hitt. ³	VHC	
HŖ-	? Gr., ? Hitt.4	RHC	Gr., IndIr.8, Lat.9, Celt.9
He-	Hitt. ⁵	VHV	IndIr. ¹⁰
-CH	Gr., IndIr.6	RHV	Gr., IndIr.11
-ŖH		CHV	IndIr. ¹² , Hitt. ¹³
-i/uH	Gr., IndIr.7	CHC	Gr., IndIr. ¹⁴
-eH	IndIr. ⁷		

1. the prothetic vowel in Armenian. 2. lengthenings of the type $s\bar{u}n\acute{a}ra$. 3. $l_{i}u$ anteš. 4. $l_{i}arki$. 5. $l_{i}anti$, $l_{i}aštai$. 6. Av. $|man\bar{a}h| < *men\bar{e}sh_2$ as against Ind. $m\acute{a}n\bar{a}m\dot{s}si$. 7. shortening in pausa. 8. laryngeal umlaut in ir and compositional shortening. 9. $R\bar{a}$, with a development of R different from that in another position. 10. hiatus. 11. laryngeal umlaut in ir, im. 12. aspiration and the explanation of the apparent exceptions to Brugmann's Law. 13. prevention of assibilation $(-t\hbar_2 i > -ti)$, not -zi). 14. Ind.-Ir. i as against a in the other languages and the interchange i/zero.

There are thus very numerous indications that the laryngeals were preserved down to the separate languages, so that one should instead ask oneself whether there is in fact any reason to assume that this was *not* the case in some position or the other.

3. THE VOCALIC LARYNGEAL AND THE VOCALIZATION OF THE CONSONANTAL LARYNGEAL

The most difficult question is that concerning the relation between the vocalic and the consonantal laryngeal and that regarding the secondary vocalization of the consonantal one. One derives the impression that secondary vocalization was nowhere as intensive as in Greek. For instance, it was stronger than in Indian, since Greek vocalized the laryngeal before consonant at the beginning of the word, and also the laryngeal at the end of the word after i and u. It was not vocalized at the beginning of the word before vowel (HV-, also before i and u), at the end after PIE e, and in the word after vowel before consonant, after consonant before vowel and between vowels; in these positions vocalization is in addition hardly imaginable. At places where a consonantal laryngeal could be vocalized one only rarely finds that the laryngeal has disappeared ($\tilde{t}\rho \circ \varsigma$, * $\tau \circ \lambda \mu \bar{\alpha}$ etc., p. 254 f.). This is also rare in Indian. The question therefore arises when vocalization took place and when it did not. At present a satisfactory answer cannot be given to this question, neither for Greek nor for Indian.

As a result, it is difficult to decide on the strength of Greek whether one is concerned with a consonantal or a vocalic laryngeal of the proto-language. For the number of cases in which a consonantal laryngeal that could have been vocalized has disappeared is very small. Consequently, in by far the majority of cases one finds in Greek a vowel, but this can stand for both \hbar and \hbar . Here only the comparison with the other languages can supply an answer.

B. SUMMARY OF THE GREEK DEVELOPMENTS

Perhaps it is useful after the fairly detailed treatment of the material to summarize once again what the laryngeal theory means to Greek. The stress should be laid on

the simplicity of the conception and the possibility of using the theory to solve various problems in the development of Greek practically without further hypotheses.

Greek suggests that the proto-language had three laryngeal phonemes; these were usually consonantal, but could also be vocalic; that is to say

$$h_1/h_1$$
 h_2/h_2 h_3/h_3

These phonemes are no longer present in historical Greek. In principle their original presence is still perceptible in colouring (to e, a and o respectively) of neighbouring vowels (except o), either original vowels or ones which developed later, or because they themselves became ε , α or o. The vocalic laryngeals could not become other than vowels; the consonantal ones were usually vocalized but seem to have disappeared in a few cases where they could also have been vocalized.

The colouring of adjacent full vowel is found in every language, so that here there is nothing specific to be found for Greek. Before consonant the laryngeal disappeared with lengthening of the preceding vowel, as in the other languages.

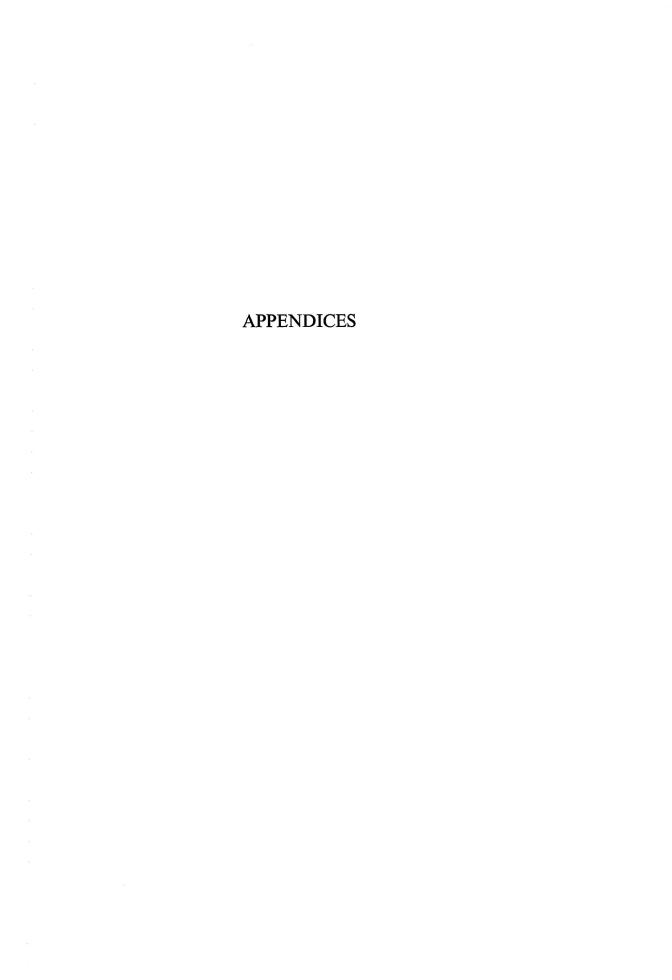
The so-called 'prothetic vowel' is based on vocalization of a consonantal laryngeal. This is also found in Attic reduplication, e.g. $*\hbar_1 le-\hbar_1 loudh-> \hat{\epsilon}\lambda\eta\lambda$ ov θ -, where an auxiliary hypothesis is necessary to the extent that one must assume that the two first consonants were repeated in the reduplicative syllable. At the end of the word after i and u the consonantal laryngeal was most probably also vocalized.

It is often impossible to make out whether a vowel goes back to a consonantal or to a vocalic laryngeal ($\pi\alpha\tau\eta\rho$, ἄνεμος).

One thus finds the colouring in the following groups:

still in PIE
$$VH$$
 HV VHV in Greek $RHC > R_eHC$ $RHV >_eRHV$ $_eRH$? HRC

All the fundamental points in the laryngeal theory that are of importance to Greek have now been given. The author hopes that this study has demonstrated the correctness of these points, without all too great inaccuracy in the details.



			*1
		÷	

AGAINST SZEMERÉNYI

In a recent article (*Phonetica*, 17 (1967), 65-99) Szemerényi attacks the view that PIE had more than one laryngeal and the assumption on the strength of this view of a language with only one vowel. Some points may be discussed here.

The article consists of two parts, the first of which deals with the matter of whether a language with one vowel is possible. With regard to the possible parallels in the Caucasian languages he states (p. 74f.): "The fact (!) that, as against the general pattern observed in all the languages of the world studied so far, one or two or even half-a-dozen exhibit a deviant, abnormal pattern will not be regarded as sufficient justification for admitting the deviant pattern as a support for a reconstruction of the deviant type." However, in my opinion it cannot be denied that the counter-argument that such a type of language is not demonstrable would then cease to apply. After his finding (p. 87) that the reconstructed system "is almost identical with that of Ubykh", his conclusion (*ibid.*) "that such a picture is quite unrealistic and is to be rejected" consequently does not seem justified.

However, it might be as well to point out that the interpretation of the data of the Caucasian languages is not yet sufficiently certain. At present we may confine ourselves to saying that there are scholars who assume that certain languages have two vowels, one or even none. But even if a language with fewer than three vowels could not be designated anywhere, the reconstruction by historical linguistics cannot be rejected, unless it can be demonstrated at which point in the reconstruction a mistake has been made. As long as it is assumed that the method of reconstruction is reliable, one can only allow oneself to be guided solely by these reconstructions themselves if one wishes to form a picture of PIE. In general it has been realized that the progress of science is repeatedly checked by denying or ignoring exceptions to what were thought to be rules of universal validity. It is, of course, quite legitimate to query the results, and this may lead to a critical look at the method of linguistic historical reconstruction, but as long as this critical study has not demonstrated any errors in the method, one cannot do otherwise than follow the old method. Szemerényi rightly states: "The question cannot be answered on a priori grounds, only empirical facts can help us to decide it". However, historical reconstruction is also

empirical. That is what Szemerényi does not realize with sufficient clarity in the first part.

Before considering the second part, a few remarks will be made. It is of essential importance to realize that we are speaking here about Pre-PIE. For it seems that in the case of PIE, the linguistic stage found by direct reconstruction from the historical languages, the vowels $e \circ a i u$ have to be assumed. But there are also indications that in an earlier stage a was not a phoneme and that i and u were allophones of i and i. It follows from this, for instance, that the words mentioned by Szemerényi with i in the stem do not form a decisive argument. If it proves that we are concerned here only with a score of words standing alone, while the i has no further function in the system of the language, it seems justifiable to conclude that the i did not originally belong to the linguistic system, and that the words mentioned are borrowings or must be explained in some other way.

The same applies to Szemerényi's treatment of i and u. He states that i and u were independent phonemes and not only allophones of i and u. If that were correct, there would not be the slightest problem for the vocalic system, which would then have been i - e - u (or i - a - u, because in that case it is immaterial whether one writes e or a), for this is "the usual triangle type (u, a, i)". However, here too it is true to say that it is possible that in an earlier stage of PIE i and u did not occur as vowels. It must be borne in mind here that it is, of course, impossible, assuming that the theory was correct, to demonstrate for all cases that the i and u developed in the zero grade of ei(ie) and eu(ie). But conversely one may not conclude from the fact that we cannot demonstrate this that the theory is incorrect.

The second part is largely based on theoretical considerations. On the strength of Jakobson's Law: "languages possessing the pairs voiced-voiceless, aspirate-non-aspirate, have also a phoneme |h|", Szemerényi assumes a phoneme |h| for the protolanguage, which he then calls laryngeal. This is, of course, legitimate as a working hypothesis, but one must bear in mind that the fact has then still to be proved.

Furthermore, on the strength of the considerations in the first part, Szemerényi proceeds from the existence of a, e and o (beside i and u) in PIE. This too is acceptable as a working hypothesis, provided that it is realized that this does not refute the entire argumentation for the laryngeal theory.

Szemerényi states that it is not necessary to assume more than one laryngeal, since eh, ah, oh explain the later forms \bar{e} , \bar{a} and \bar{o} just as well as $e\hbar_1$, $e\hbar_2$, $e\hbar_3$. However, in his view there are also long vowels \bar{e} , \bar{a} and \bar{o} that do not go back to short vowel + laryngeal, so that for PIE the long vowels \bar{e} , \bar{a} and \bar{o} must be assumed too. Szemerényi bases this on cases like Hitt. $pah\dot{s}$ -: Lat. $p\bar{a}sco$ as against Hitt. $pa\dot{s}$ -: Lat. $p\bar{o}tare$. This assumption is thus founded entirely on the Hittite data: "Surely, the only real evidence that we possess is afforded by the Hittite evidence with h" (p. 91 f.). Two comments may be made about this. As already stated in the Introduction (p. 6), it seems dangerous to me to take only Hittite as a basis. For it is quite possible that a

more thorough knowledge of Hittite would lead to a different explanation of the apparent exceptions. In the second place there are also other criteria than the Hittite material. The apparent strength of his theory lies in the fact that he proceeds from one language only, namely the one that offers other scholars the most difficulties, and ignores the other data.

Further, he is of the opinion that the assumption that \hbar_1 has disappeared in Hittite is in contradiction with the forms with $\hbar e$. He believes that he can solve this by assuming that (his one) \hbar was preserved. However, this too is a solution in appearance only, owing to the fact that Szemerényi takes the facts of just this one language as a basis. The difficulties occur when one combines the data of the different languages. If one assumes, for instance, that Gr. ℓ is ℓ one goes back to ℓ in Hittite proves to have no ℓ (ℓ in Hittite proves to have no ℓ (ℓ in Hittite does have ℓ in Hittite does have ℓ (ℓ in Hittite material summons up a number of questions and I therefore fully agree with Szemerényi that further research is called for here. However, in that case it is the question whether one may base such far-reaching conclusions on it at the present stage.

He gives two interpretations of the vocalic representation. According to the first one (p. 90) an anaptyctic vowel developed after the h, whereupon the h disappeared $(ChC > Ch_eC > C_eC)$. The second is based on the assumption that PIE also had long vowels with a zero grade ∂ , i.e. for instance \bar{a}/∂ . He established the connection with our problem as follows: "It was this type which attracted the laryngeal type so that their nil-grade, H, became $h\partial$, later ∂ ". Both explanations presuppose in any case that after the h a vocalic element came. He states then: "At long last, we get a better purchase for the understanding of the development of the nil-grade of long vowel roots" (p. 92). I do not see where the progress lies. In my view he is returning to Kuryłowicz' view (of 1935); see p. 94 of this book.

His assertion that the mediae aspiratae are often explained from media + laryngeal is not essential. However, he does not clearly state that this applies only to Indo-Iranian mediae aspiratae (as his example Skt. aham: Lat. ego indicates). His thesis that the mediae aspiratae were diphonemic in an earlier stage of the proto-language is therefore not based on the slightest concrete indication.

In the following eight lines (p. 92.4) the tenues aspiratae are reinstated. The only basis for this is the finding that every language that has a dh beside t and d also has a th. This too is an *aprioristic* use of an *empirical* datum and so is not binding. Szemerényi fails to give series of correspondences by which these phonemes are determined.

Szemerényi concludes by remarking that he has seen no reason for assuming more than one laryngeal. Reference may be made here to the Greek material; three laryngeals are suggested above all by the "prothetic vowel", Attic reduplication, the triple reflex and the development of the group sonant + laryngeal (e.g. $r\hbar_1 C > \rho \eta$, $r\hbar_2 C > \rho \bar{\alpha}$, $r\hbar_3 C > \rho \omega$ in the disyllabic roots and in $\nu \eta$ - $\nu \bar{\alpha}$ - $\nu \omega$ - of the negative adjectives, and $r\hbar_1 V > \epsilon \rho$, $r\hbar_2 V > \alpha \rho$, $r\hbar_3 V > o \rho$ in the thematic aorist). Szemerényi dismisses all this with a reference to Kuryłowicz' view in *Apophonie*, the correctness of which was disputed above.

To sum up, one may say the following. Szemerényi's set-up is aprioristic, which is most clearly evident in the acceptance of the tenues aspiratae for the proto-language. Here he even makes no attempt to verify the theory against the facts. His denial of the existence of three laryngeals is based on the fact that he only incorporates a few Hittite data, but leaves others, notably the Greek, out of consideration. It is permitted to bring forward a theory without working it out entirely, if such an idea was not yet known, but it is *not* permitted to reject an existing theory that has far-reaching consequences without discussing all the problems involved. Szemerényi's procedure is in accordance with the fact that, on the point of the possibility that a language with only one vowel could exist, he states that he does not wish to be guided by the facts.

Ν 707: τέλσον ΑΝΟ ὧλκα

I have changed my opinion about $\delta \lambda \kappa \alpha$, discussed on p. 40. I may treat this problem at some length in its context. For the sake of convenience the relevant text may be given here:

701 Αἴας δ' οὐκέτι πάμπαν, 'Οιλῆος ταχὺς υἱός, ἵστατ' ἀπ' Αἴαντος Τελαμωνίου, οὐδ' ἠβαιόν, ἀλλ' ὡς τ' ἐν νειῷ βόε οἴνοπε πηκτὸν ἄροτρον ἱσον θυμὸν ἔχοντε τιταίνετον' ἀμφὶ δ' ἄρα σφι

705 πρυμνοῖσιν κεράεσσι πολὺς ἀνακηκίει ἱδρώς τὼ μέν τε ζυγὸν οἶον ἐύξοον ἀμφὶς ἐέργει ἱεμένω κατὰ ὧλκα, τέμει δέ τε τέλσον ἀρούρης ὡς τὼ παρβεβαῶτε μάλ' ἔστασαν ἀλλήλοιιν.

The article by V. Pisani, Athenaeum N. S. 18 (1940) 3-10, on the subject may be the starting-point. His argumentation is this. Stating that PIE ls between vowels did not remain in Greek and noting that a suffix -σο- is rare, he argues that N 707 is the oldest context for the two words (which may well be right; the other occurrences are for τέλσον Σ 544.547, for δλκα σ 375). For τέμει δέ τε τέλσον ἀρούρης he compares Hdt. 4.136 τετμημένων τῶν ὁδῶν, Plat. Crit. 118 Ε διάπλους ... πρὸς τὴν πόλιν τεμόντες, etc., and concludes that it can only mean 'scava il solco della terra'. In that case δλκα could not mean 'furrow' and, accepting its connection with Lith. velkù, he maintains that "l'<*>ἀρολξ lungo o durante il quale i buoi si sforzano, non è altro che il trahere dei buoi stessi, la loro azione di tirare l'aratro."

There are objections to this view. First it seems improbable that *ἀρολξ designates 'the action of drawing' rather than a concrete object. Secondly, κατά would be difficult: it is never used in a temporal sense in Homer and I find no parallels to show what κατὰ ὁλκα could mean otherwise (LSJ s.v. and Chantraine, Gr. Hom. II, p. 114 f.). Thirdly it is assumed that τέμει contains the same root as τέμνω. This is not impossible, but Monro's suggestion that it is a present with the same root as ἔτετμε 'he reached' deserves at least consideration. But most important is that Pisani rejects the value of the gloss τέλσας στροφάς, τέλη, πέρατα Hsch., p. 3 n. 1:

"il significato che Esichio attribuisce alla parola è, a ogni modo, secondario." I see no ground for this assertion. On the contrary, since we do not have here the same word as in Homer, and since it is improbable that Hellenistic *poetae docti* or grammarians would have created $\tau \dot{\epsilon} \lambda \sigma \ddot{a}$, $\tau \dot{\epsilon} \lambda \sigma \eta$, it is much more probable that we have here an independent piece of evidence for the meaning of $\tau \dot{\epsilon} \lambda \sigma$ -ov, $-\eta$.

A suffix -σo- may be rare in Greek, but morphologically there is nothing against assuming a derivative from τέλος (cf. Skt. $v\acute{a}tsa$ - against $F\acute{\epsilon}\tau$ ος). Phonetically the development of ls is not clear. Lejeune, $Trait\acute{e}$, p. 107, states that it is retained, but his examples are ἄλσος and τέλσον, of which ἄλσος is of no use since its origin is unknown, and τέλσον is the word under discussion. On p. 108, moreover, Lejeune gives instances in which the s is lost, instances which can hardly be dismissed. On the other hand we may expect the same treatment as for rs, and there are clear cases in which we find this group preserved, e.g. ἐέρση, κόρση; so ls might be retained as well in some circumstances. In any case, as the question is not definitely settled, the possibility that ls remained cannot be excluded. (One is reminded of the problem presented by ἀπόλλυμι, etc., Lejeune, $Trait\acute{e}$, p. 133.)

Now when τέλσον is 'turning-point', τέμει is probably 'reaches'. Then there is the question of what δλκα means. F. Solmsen, Unters., p. 258 ff., treated the form: the hiatus in κατὰ δλκα suggests F-, but *Fωλκα is impossible, since this would have been shortened to *Fολκα. We must therefore assume * $\mathring{\alpha}F$ ολκα [the other possibilities, *Fασολκα/FαJολκα < * u_e solk- u_e iolk- or * u_e 2esolk- u_e 2eiolk- giving very unusual structures, if the word is IE]. This form was contracted in the living language to δλκα, which was introduced into κατ' $\mathring{\alpha}F$ ολκα, while — as the metre was then disturbed — κατ' was replaced by κατά, despite the hiatus. What is the meaning of the word? As it may be cognate with Lith. $velk\mathring{u}$ 'to draw', I thought of 'the thing drawn = the plough' (cf. $\mathring{\alpha}\lambda$ οξ 'furrow' — $\mathring{\epsilon}\mathring{\nu}\lambda$ άκᾱ 'plough', OE sulh (< * s_k^2) 'plough, furrow'), which would give us a subject for τέμει (see Leaf ad loc.), but then κατά makes no sense. We should therefore retain the old explanation 'the thing drawn = the furrow'. (For the use of κατά cf. O 682 καθ' δδόν, Z 391 κατ' ἀγυιάς etc. and specially Λ 68.)

As *åFo $\lambda\xi$ may safely be considered cognate with Lith. velku etc., the PIE root had the form * $\hbar_2 uelk$ -. This is the relevant point for this book, and the form *åFo $\lambda\kappa$ -should be added on pp. 56-8 and p. 69. Beside it there was *selk- with the same meaning ('to draw'), see e.g. Frisk s.v. $\xi\lambda\kappa\omega$. Though this is remarkable, we should not be embarrassed by such phenomena. There are many comparable things in the living languages, and there is no reason why PIE should not have had them.

As to *å ρ 0 ξ itself, the form may be either a nominative with o-vocalism, * $\hbar_2 \mu \delta lk$ -s (cf. p. 89 on å $\lambda \kappa$ - $\dot{\eta}$) or a zero grade, * $\hbar_2 \mu lk$ -, in which we might expect $\alpha \lambda / \lambda \alpha$ or

¹ Xeip is not relevant, since it is derived from *ghesr-, as Hitt. ki-eš-šar 'hand' proves (see for instance Schmitt, Igd. Dichterspr., p. 145 ff.).

² It seems most probable that there is a chronological difference, the words with ρσ looking like relics. In some cases analogy may of course have played its part.

Aeolic ολ/λο from l. About the other forms, ἄλοξ etc., uncertainty remains. Αδλαξ may also represent * $\hbar_2 u l k$ -, but the ε- of εὐλάκ $\bar{\alpha}$, the o- of ὅλοκες (and in -ωλακ-), the χ in αὐλά $\chi \bar{\alpha}$, and ἄλοξ itself would be irregular. Cf. beside Frisk s.v. ἄλοξ also Buck, Gr. Diall., p. 51.

I may take the opportunity to make a few remarks on the relevant passage in N. Firstly, the verse N 707 is a fairly old one, because it contains two words that occur nowhere else, τέμει and ὅλκα (Pisani rightly points out that the author of σ 375 probably connected τέμει with τέμνω, because he writes εἰ ὅλκα διηνεκέα προταμοίμην). The simile is made to describe the Αἴαντε, which are not the two heroes called Ajax, but the two sons of Telamon, as Wackernagel demonstrated (see e.g. D. L. Page, History and the Homeric Iliad, p. 236 f.); the simile could therefore be as old as the original use of this dual. We then observe the excellent rhythm of the line, all major incisions of which coincide with the important caesurae: the trithemimeres, the trochaeic caesura, the hephthemimeres and the bucolic caesura. However, at the same time it has one of the extremely rare violations of Hermann's Bridge, though it will be agreed that δέ τε go closely together. Are we to conclude that this refinement was later observed more strictly? Cf. the Add. to p. 66.

As regards metrics, in vs. 705 three things may be noted. First the third element is long through v-movable, which is not an old trait (see Hoekstra, Mod., pp. 71-111). Secondly the last syllable of πολύς, though followed by a vowel, is counted long, and thirdly the F- of ίδρώς is not observed. The last two facts can both be accounted for by comparing Ψ 507, where the second part runs: πολύς δ' ἀνακήκιεν ίδρώς. Not only does the problem of πολύς not exist here, but it may also be reasonably supposed that the v-movable was introduced here only when F- had disappeared. For the last point we must also compare Λ 811 Ψ 715 κατὰ δὲ νότιος ῥέεν ἱδρώς | (of which Ψ 688 ἕρρεε δ' ίδρώς | is reminiscent). Here too it is probable that the formula originally had F-, not the v-movable. I state this rather circumstantially because Chantraine, Gr. Hom., p. 156, finds difficulty with the fact that there is no trace of F-, and even supposes that there might have been a PIE by-form with s- (instead of su-); thus Frisk (s.v. ἐμέω, to which he refers s.v. ἱδρώς) says: "Das Fehlen des Digamma bei Homer ist nicht befriedigend erklärt." Now not only are there traces of F-, but even if there were not, there would be nothing to be explained: in the last phase of epic poetry F- had disappeared from spoken language, and though many traces of its original presence have been preserved in traditional formulae, it is only natural that there are as many or more cases where this F- is absent. To be clear, N 705 is an adaptation of the formula found in Ψ 507, and the only difficulty is $\pi o \lambda \dot{\omega} \zeta$ (the author simply could not use $\delta \dot{\epsilon}$ and left it out, not considering the metrical difficulty serious enough to remedy it), for in ἀνακήκιει ίδρώς there was no problem for him. (It may be noted that the two formulae do not date back to the oldest phases of epic poetry, since ίδρώς originally had sy- (cf. OHG sweiz), of which the expected 'F- would have lengthened a preceding short vowel (as for instance *'γὴν, see p. 61); for ίδρώς see besides Frisk also G. R. Solta, Die Stellung d. Armenischen, p. 61 f. with n. 60.)

An old element may be seen in $\beta \delta \epsilon$ of vore (where F- is observed), since we found Myc. 'Woino''ks' as the name of an ox.

As regards ἀμφὶς ἐέργει (706), Pisani rejects the explanation 'hält auseinander', and thinks that the yoke 'constringe da ambedue le parti'. I think olov is against this (it would be meaningless).

We have then all in all a typical situation: some stray old elements, a whole old verse, of which the meaning was soon no longer understood, together with contemporaneous elements of the last phase of epic tradition (the loss of F- in 705), the whole a picture full of interest and force, culminating in the last half verse (707): the reader (listener), whose sympathy for the labouring bulls was aroused by vs. 705 and who sees the animals "struggling along the furrow", is told in few words, added paratactically — which adds to the directness — that, notwithstanding ($\delta \epsilon$) the fact that the work is terribly hard (depicted in the heavy word (F) $\epsilon \mu \epsilon \nu \omega$ at the beginning of the line), the plough, as you will have seen yourself happening so many times ($\tau \epsilon$), has not reached, but is reaching, is busy reaching (the present $\tau \epsilon \mu \epsilon \nu$) its goal, and then, at the climax, or rather just before reaching the climax, before suspense would be broken, we are suddenly returned from this peaceful toil to the battlefield: a simile well worthy of 'Homer.'

STRUNK, NASALPRÄSENTIEN UND AORISTE.

The problem of the nasal presents of set roots is treated by K. Strunk, *Nasalpr.*, pp. 21-59. As many points are of interest to our study, I may make some brief comments on them.

Of importance is his argument that nasal presents of the type TR-n-eH-mi have a root agrist TR(e)H-. To my list on p. 226 should be added: *ἔβλην, found in ξυμβλήμεναι Φ 578, ξυμβλήτην (3. du.) φ 15, βλείης (2. sg. opt.) Epich. Fr. 219 (Kaibel), βλείς (ptc.) id. Fr. 176 and ἔβλη EM 199,55 (o.c., p. 45); apart from κατέβρως there is ἔβρως Call. hy. 1,49 and ἔβρω ἔφαγεν, ἔδακε, διέσπασε Hsch. (o.c., p. 48). This confirms my view that ἔτεμε cannot derive from an agrist *έ-temħ1-t. The same situation occurs with the presents in -n-eu-mi, which also had a full grade II agrist (Skt. $a\acute{s}rot < *\acute{e}kleut$, ἔσσευα $< *\acute{e}kieu\eta$); there are no agrist roots of the type *Fερυ-, *Fελυ-. (Of course I do not agree with the statement (p. 43 f.) that βλῆτο etc. have "starre VS [Vollstufe] II".)

However, Strunk holds that the Sanskrit aorists of the type astarīs are originally athematic, referring to J. Narten, Die sigmatischen Aoriste im Veda (Wiesbaden, 1964). It may be right that the type astariṣam has been built on the athematic aorist, which is why the root has no lengthened grade. If so, my remark on the subject on p. 227 should be deleted. Strunk tries to show that these aorists are innovations, to my mind not very convincingly (pp. 49-54). The idea that these are old imperfects (p. 52) seems to me more probable; cf. p. 224 ff. (of this book) on some Greek (thematic) aorists.

It may be useful to point out that, even if aorists with roots of the type TeRH-occurred, it is improbable that ἔτεμον was derived from *é-temħ₁-. If the full grade form of the singular of the athematic aorist was transformed into another aorist type within Greek, we might expect, parallel to *é-temħ₁-t > ἕτεμε, from *ékemħ₂-t > *εκεμα, which would have become a 'pseudo-sigmatic' aorist of the type ἔχευα; as this does not occur, the first development (*é-temħ₁-t > ἕτεμε, which would have been the starting-point of the thematic aorist) is also improbable. If one explains ἕτεμον from *é-temħ₁-om, we would also expect *ἕκεμον < *é-kemħ₂-om; as the latter is not found, the first development is also improbable. Perhaps the type *é-kerħ₂-t > *εκερα was transformed into a s-aorist, ἐκέρασα; in that case we would

expect from *έ-tem h_1 -t a form *ἐτέμεσα (as in ἀπ-έμεσσε). I see no way to prove or refute the last assumption. To my mind, then, even if there were a orist roots of the type TeRH-, they were not the starting-point for ἔτεμον. (Cf. also p. 224 n. 111.)

By way of criticism I must say that I do not think that the fact that nasal presents have root aorists is as important as Strunk holds. The only other possible type is a s-aorist, and it has not been shown that this type is not old with these presents; for thematic aorists are probably all recent and derived from athematic ones, as Strunk admits on pp. 97-100. (I consider the theory of *likue- as a variant full grade II (II'), with an old present *li-n-kue-ti and aorist *e-likue-t, very improbable, because such root structures (ending in a vowel) are otherwise unknown in PIE (o.c., p. 32f.).)

Strunk too interprets $\beta \acute{a}\lambda\lambda\omega$ as thematization of a nasal present, on morphological grounds (the parallel with $\kappa \acute{a}\mu\nu\omega$ etc.). He too therefore allows presents in $-n\bar{e}mi$ and $-n\bar{o}mi$. See his review of the problem, p. 56-9. His most important argument seems to me Skt. $prn\bar{i}hi$, which is cognate with $\bar{e}\pi o\rho\sigma v$ and therefore indicates $prn-e\hbar_3-mi$. As for $prn\acute{a}ti$ compared with $prn\acute{a}ti$, he too holds that the first form "darf ... als typologisch jünger gelten" (p. 57).

As regards $\pi\rho i\alpha\tau o$, Skt. $kr\bar{t}n\dot{a}ti$, I may stress the fact that $*k^uri-n-e\hbar_2$ - is an unusual structure, as is a root $*k^urie\hbar_2$ -. It might be useful to distinguish between the behaviour of three- and four-consonant roots ($*krem\hbar_2$ -, $*dhyen\hbar_2$ -).

I am not convinced by the reasoning that ἔκιον represents *έκιμοm (p. 101 f., especially n. 281): I do not see why in the stage of development of which we are speaking the form συ- would not have acted upon *kiu-/kiu-, and — which is more essential — I do not believe in the automatic distribution of syllabicity which would produce *kiu-. Edgerton's laws do not explain all problems; things are more complicated.

Two important points may be further noted.

Strunk thinks (p. 72 ff.) that the types τανύω tanóti, ἄνυμι sanóti derive from *tn*n-eu-* etc. This cannot be correct since this development is impossible for Greek. A form *tnneu- would have given *ταννυ-, because a vocalic sonant before another (consonantal) sonant develops into VR: θαρνεύει < *dhṛ-n-eu-, χαίρω < *ghṛ-i-, ἰοχέαιρα < *-χεσχια < *isuo-ghesr-i \hbar_2 , βάλλω < * g^u ί-n-, μαίνομαι < *mη-i-, βαίνω $< *g^u m - i -$, δάμνημι < *dm - n -, κάμνω etc. (*τομν < *tm - n -, see p. 223). It may be pointed out again that there is a difference between nn and n, and that confusion can arise from the fact that some scholars use nn in the function of n. There is no reason why -ανν- should have been reduced to -αν-; compare Aeolic (?)δίννω (Hdn.), and (much more recent) κεράννυμι κορέννυμι. On the necessity of assuming structures of the type $*t_e$ neu- see p. 236. (The form $\alpha \chi \epsilon \nu$ - may be derived from * \hbar_{2e} gheu-. I am not convinced that there could not be a second present beside $\alpha\chi\nu\nu$ μαι < *ħ2gh-n-u-, and I am also not convinced that Hom. ἀχεύων can be better understood as a rist: with Ε 869 καθέζετο θυμὸν ἀχεύων we may compare καθέζετο κύδει γαίων | (A 405 E 906 Θ 51 Λ 81), and in five out of eleven occurrences of ἀχεύων we have ὀδυρόμενος καὶ ἀχεύων, Ι 608 Ω 128 β 23 δ 100 ξ 40.)

Strunk's interpretation of Greek στρατός (p. 111) is entirely unacceptable to me. He discussed it at great length in Münch. Stud. z. Sprachwiss. 17 (1964) 77-108. It may be discussed in greater detail, because Strunk gives his treatment as an example of a good etymology, while it is to my mind a forced one, and because I see (November 1968) that Frisk seems to be influenced by him and considers the question to be undecided, while I think it is perfectly clear. It is to be regretted that we have repeatedly to fight for results obtained long ago.

Strunk holds that Skt. strta- can only mean 'niedergestreckt, besiegt', that this is the original meaning of the anit form of the root *ster-(\hbar_3 -), and that $\sigma\tau\rho\alpha\tau\dot{o}\zeta$ developed either from '*niederstreckbar > *Feindesheer > Heer' or, with active meaning of the adjective in -tos, from '*Niederstrecker'.

This semantic development may not be quite impossible, but I know of no parallel, while the old interpretation ('Feldlager' > 'Heer') has many parallels (Strunk, p. 78 f.: στατόπεδον, Byzant. φοσσᾶτον etc., Dutch leger). I do not see what reality there is in the suggestion (p. 79) that these developments "viel späteren kriegstaktischen Vorstellungen entwachsen sein dürften." The statement that the meaning 'Feldlager' must be demonstrable in the case of στρατός before we could assume the same development here must, of course, be rejected. It would be irrefutable evidence, but the interpretation would remain just as possible if we could not point to this meaning.

As it is, there are cases in Homer where στρατός means 'camp'. Strunk admits this (p. 80, 86), but rejects these cases as secondary. This is all the more unrealistic since there is as strong confirmatory evidence as one could wish that this is the *oldest* meaning. Let me give Strunk's treatment first. He states that the meaning 'camp' is only possible where the word stands in the accusative and forms the second element of the fourth dactyl. He proceeds from the other cases and tries to demonstrate that in all these cases the meaning is 'army'. Sometimes this demonstration fails to convince. I may give one example. He holds that there is an opposition στρατός 'common people': ἄριστοι, βασιλῆες; this may be right, but the application in the case of A 10 (and some others) is overstrained (p. 84f.): "A 9-11 wird die Strafe des Gottes ausdrücklich so gekennzeichnet, das für den Frevel des Agamemnons die gemeinen Krieger sterben müssen." This is a clear case of 'hineininterpretieren'. At least the meaning 'camp' is equally possible here. (Perhaps in these cases no choice is necessary: στρατός means 'the encamped army', just as, when we say "at school", school means both the building and the people working there.)

But this is not the main objection. He further considers that in the formula too the meaning 'army' prevails, and states (p. 87) "Eine Lösung ... kann in der relativen Häufigkeit der einen oder anderen Sinngebung im Rahmen der Formel gesucht werden." This again is not acceptable: such questions are not decided by numbers. Though he recognizes that formulae may contain old elements, he holds that here the meaning 'camp' was later introduced by 'Umdeutung' of the formula. This again is highly improbable, for $\sigma\tau\rho\alpha\tau\delta\varsigma$ was so well known in the meaning 'army', that 'Umdeutung' is most improbable.

Let me give the facts as I think they should be presented. In the *Iliad* — the five instances in the Odyssey may be neglected — the ciphers for the occurrences of the different cases are: sg. gen. 7, dat. 4, acc. 46, pl. nom. 1. Formulae should thus be looked for in the accusative; that the genitive will not contain anything old appears from the form, στρατοῦ, not -οῖο (a form that would not fit the dactylic hexameter!). Now there is virtually one formula only: after the trochaeic caesura - στρατὸν εὐρὺν Άχαιῶν , in which - is a preposition: κατά 4 × , ἀνά 1 × (before the bucolic caesura $1 \times$; with ὀρώρει instead of Άχαιῶν $1 \times$), μετά $1 \times$, ἔσω $1 \times$; without εὐρὺν Αχαιῶν we have between trochaeic and bucolic caesurae κατά στρατὸν 17 ×, ἀνὰ στρατὸν $5 \times$ (on other places $2 \times$) and (after the penthemimeres) μετὰ δὲ στρατὸν 1 ×. All instances mentioned together form 34 out of the 46 accusatives. This to my mind is a clear instance of a formula with shortened and shifted variants (note Ψ285 κατὰ σ. ὅστις 'Αχαιῶν). The original formula falls between trochaeic caesura and verse-end. The most obvious conclusion is that this is an old formula, where the original meaning 'camp' has sometimes been retained. (That the formula was reinterpreted as 'army' is not strange, since this was the normal development of the word.) This is confirmed by $\mathfrak{spo}(9\times)$, which means 'broad, extending broadly', a mostly geographical term. Strunk's reference to the 'breite Masse' suggests a meaning which is not a natural epithet for people in the Homeric language, and certainly not in an old formula.

The only old formula in which $\sigma\tau\rho\alpha\tau\delta\varsigma$ is used sometimes displays the meaning 'camp', a meaning confirmed by the use of the epithet εὖρύς (cf. $\sigma\tau\rho\alpha\tau\tilde{\varphi}$ εὖρέῖ Δ 76). The fact that in many cases one hesitates between the two meanings shows how natural this semantic development is; but that was already known from the three parallels. This meaning is incompatible with Strunk's hypothesis, which must therefore be abandoned.

The etymology is then clear: *strtós means 'spread out'; what is spread out is (a place or) things to lie (up)on, a sleeping-place, which is one of the natural meanings of στόρνυμι, cf. I 621 στορέσαι πυκινὸν λέχος.

(Remark. In Mycenaean we might expect from *strtos a form *στορτος. It should be remarked that this form cannot be used in our formula, and secondly that Cretan σταρτος might be the Doric form στρατός influenced by *στορτος from the Mycenaean substratum; but see on Cretan Buck, Gr. Diall, § 49. 2a and 70.1.)

Attention may be drawn to the fact that the Germanic languages sometimes have \bar{e} -forms beside \bar{a} - or \bar{o} -forms in the other languages. If these are a reality, we must decide from case to case whether this implies root variants or ablaut forms.

Strunk (p. 37) assumes for γιγνώσκω a root * $\hat{g}ne\hbar_3$ -, but points to (n. 43) Germ. * $\hat{g}n\bar{e}$ -, e.g. OE $cn\bar{a}wan$. This implies * $\hat{g}ne\hbar_1$ - beside * $\hat{g}ne\hbar_3$ - 'to know' and, identical with the first or not, * $\hat{g}ne\hbar_1$ - 'to be born'. Now the different forms to my mind (see p. 166) suggest that * $\hat{g}n\bar{o}$ - is an ablaut variant of * $\hat{g}ne\hbar_1$ -, that is * $\hat{g}no\hbar_1$ -.

When OIcel. $kr\bar{a}s$ 'Leckerbissen' points to $*g^ur\bar{e}$ - beside $*g^ur\bar{e}$ - in βιβρώσκω, one could consider βρω- as resulting from $*g^ur\bar{e}h_1$ -; that this root form was generalized (like $*\hat{g}n\bar{e}h_1$ -) is, however, not confirmed by the cognate forms (Skt. $g\bar{i}rn\hat{e}$ -, garat, $g\bar{a}rit$, $gir\hat{a}t$ i, gigarat, Lith. girtas, Arm. eker, Lat

vorare). Consequently a root variant $*g^u er h_1 - |g^u re h_2 - |g^u$

Lastly we may recall $\chi\dot{a}o\varsigma$ etc. against OHG $g\ddot{e}won$, which points to $^*\hat{g}h\bar{e}u$ - (p. 178). Does this require root variants $^*\hat{g}heh_1$ - $/\hat{g}heh_2$?

			,	

- p. 35. (ἄρπυια.) Snell notes on Pi. Paean 6.136 that α is impossible, and that it must have been ε or σ vel sim., but S. L. Radt, Pindars zweiter u. sechster Paian (Amsterdam, 1958), p. 180 f., remarks that he cannot find traces of ε . See for all the forms M. L. West, Hesiod, Theogony, p. 428 ad vs. 990. The problem cannot be solved as yet.
- p. 51. ἀστράγαλος. It may be doubted whether the form στράγαλος, *Vita Aesop*. (G) 69 (LSJ Suppl.) is old; if it were, it would confirm that the word is non-IE.
- p. 53. εἰκῆ. Delete ἕνεκα
- p. 53. ἐύς. See the Add. on p. 65 (εὐρύς).
- p. 54. ὀδάξ. From the point of view of the formulaic language it is also clear that the formula where ὀδάξ can only mean 'with the teeth' is the younger one. When we compare ὀδάξ ἕλον ἄσπετον οὖδας (Τ 61 Ω 738 χ 269), to which (ὁ δ' ἐν κονίησι) πεσὼν ἕλε γαῖαν ἀγοστῷ (Λ 425 N 508.520 Ξ 452 P 315) is the parallel for the third person singular, with ὀδάξ ἐν χείλεσι φύντες (α 381 = σ 410 = υ 268), the last formula is characterized as recent by the dative in -εσι (against the older form in -εσσι). The last formula recalls λὰξ ἐν στήθεσι βαίνων/βάς (N 618 Π 503/Z 65) with the same dative. Here the relation is very pronounced: 8 times στήθεσι against 128 cases of στήθεσσι.
- p. 56. ἄεθλος. Compare now πενταγεθλεδν on a άλτήρ from the Isthmus, early sixth century BC. (LSJ Suppl. s.v. πενταθλέω).
- p. 61. (εἴκοσι). The reconstruction την πατρίδα γαῖαν seems confirmed by an analysis of the formulaic use of πατρίδα in the *Odyssey*.

It occurs 57 times combined with γαῖαν, and this combination is found either at the end of the verse (A, 43×) or followed by a form of iκέσθαι ($\vee - \vee$), which is final (B, 14×). The second group (B) is preceded by a possessive ($\sigma \dot{\eta} v$, $\ddot{\eta} v$; 9×) or $\pi \rho \dot{\nu} v$ $(5\times)$. The first group (A) is in more than half of the cases preceded either by φίλην $\mathring{\epsilon}_{\varsigma}$ (13×) or a possessive $+\mathring{\epsilon}_{\varsigma}$ (σήν, $\mathring{\epsilon}$ ήν; 10×). Of the remaining twenty cases we find $\pi \alpha i \rho i \delta \alpha \gamma \alpha i \alpha \nu$ without $\dot{\epsilon} \varsigma (9 \times)$ either by itself $(6 \times)$ or preceded by a form of ίκέσθαι (3×); the other cases (11×) have ες πατρίδα γαΐαν, four times preceded by a form of ίκέσθαι. Of the seven cases where ες πατρίδα γαΐαν stands by itself, six are in the two formulae discussed on p. 61, the only other instance being ξ 322. The conclusion is that πατρίδα γαΐαν almost always has an adjunct, mostly a possessive; in the second group (B) this is even clearer. The second group also demonstrates that ες is not necessary with ίκεσθαι, and the construction without the preposition will be the older one. Now I think this situation makes it probable that ές has replaced a possessive. It is important to note that σὴν ἐς πατρίδα γαῖαν does not coincide with a caesura: it is a recent variant for a second person; the replacement of a third person formula by one for the second person is also clear in the second group (B). In the formula for the third person with êc, it was possible to fit it into a caesura by using the form εήν instead of ήν. One might wonder why for the second person τεήν was not used; probably the form was too unusual for the singers who made the change (cf. Chantraine, Gr. Hom., p. 271).

The double consonant of $\eta\nu$ may also be concealed in the formula δ 558 = ϵ 15 = ρ 144: ἴσχει. δ δ' οὐ δύναται $\eta\nu$ πατρίδα γαΐαν ἰκέσθαι, if we assume that the verse originally occurred in narrative with the form δύνατο 'γ $\eta\nu$. For the more recent present for an older imperfect cf. ἀνακ η κιε(ν), App. II, p. 277, and η σαν supposed in the Add. on p. 108 f. (Ἰσχε would not fit the metre; ν -movable is improbable. The verse may originally have run:

^{*}αὐτὰρ ὅ γ' οὐ δύνατο Γρην πατρίδα γαῖαν ἱκέσθαι.)

p. 64. (ἔλπομαι). M 407 has θυμὸς ἐέλπετο. In this form (also in N 8.609 ψ 345) the ἐ- may of course be the augment (Chantraine, *Gr. Hom.*, p. 480). Then N 813 θυμὸς ἐέλπεται may be θυμὸς ἐέλπετο transformed into a present. (It would be an instance of 'verschlepptes Augment', but this only artificial, to be well distinguished from that of the living language, Schwyzer, p. 656 d.)

p. 65. εὖρύς. Though they constitute desperate problems, I may add a few remarks on εὖρύς and ἐύς, the more so as I disagree with regard to the last with one of the latest reviewers, R. Schmitt (*Dichtung*, notes 511, 530, 728, 739, 743, 863, 865, 867).

If a laryngeal should be assumed — for which there is no positive evidence —, beside $*\hbar_1euru$ - a form $*\hbar_1euru$ is possible, and, as I now hold, $*\hbar_1uru$ -; I am no longer of the opinion that the |u| should necessarily have been vocalic in this sequence. A form $*(\hbar)uru$ - is found in Av. urv-ap-, though this is in composition.

We are thus left here too with four possibilities: *eur-, $*\hbar_1eur-$, $*\hbar_1$

ἐύς. The fact that the compounds with ἐυ- in Homer have no trace of F-, and the fact that these compounds have e-u- in Mycenaean (Chadw.-Baumb. s.v. ἐύς) show clearly that the Greek word did not have the u- found in Skt. vásu- etc.

The interchange $\dot{\epsilon}$ -/ $\dot{\eta}$ - has been explained as metrical lengthening, for instance by Frisk; Leumann, *Hom. W.*, p. 317 n. 107, holds that it originated in compounds. Against this must be argued first that from recent lengthening one would expect $\dot{\epsilon}$ iv- (but non-Ionic lengthening might indeed be found in $\dot{\omega}\lambda\dot{\epsilon}\sigma(\kappa\alpha\rho\pi\sigma\varsigma)$; this seems better than Strunk's view, *Nasalpr.*, p. 120, that ω represents the original length of the *s*-aorist). Secondly there are in Homer only two such compounds.

That these forms are old is clear. We have four instances of ἡυγένειος: λ ῖς ἠ.| O 275 P 109 Σ 318, λ έων \sim ἠ. | δ 456 (λ ῖς further only Λ 239, at the same place in the verse, preceded by ὅστε as in P and Σ , but followed by ἐκ δ' ἄρα χειρὸς: evidently a remnant of the formula; λ ῖν Λ 480, the same book).

'Hύκομος occurs Il. $3 \times$, Od. $1 \times$, -οιο Il. $15 \times$, Od. $2 \times$. A frequent formula is (δῖος) Ἀλέξανδρος, Ελένης πόσις ἠυκόμοιο, Γ 329 Η 355 Θ 82 Λ 369.505 N 766 (a variant is Ἑλένης ἕνεκ' ἠυκόμοιο Ι 339). Θέτιδος πάις ἡ. (Δ 512 Π 860) may be recent, since Thetis' usual epithet is ἀργυρόπεζα, which might have been used here too. Άθηναίης ἐπὶ γούνασιν ἠ. (Z 92. 273. 303) is not necessarily a formula, but may be only a 'repeated line' (see J. B. Hainsworth, The Flexibility of the Homeric Formula, 1968, p. 41); moreover, it is too flat a description for Athena. Further, it is used of Briseis (B 689), Hera (πόσις "Hρης η, K 5; the occurrence with $\pi \circ \sigma \iota \varsigma$ suggests that it has been taken from the formula with Helen and this confirms that that is the old formula; for Hera too it is too flat; note that it is in K), μητέρος (Ω 466, the only instance without a name, though Thetis is meant; note Ω) and Calypso (θ 452 μ 389). In the nominative we have (τ)ον ή. τέκε Λητώ | (Α 36 T 413 λ 318) which may be old, and Ω 602 of Niobe (note Ω again). The conclusion seems that the oldest formula is that with Helen. That this (the wole line) is very ancient is demonstrated by the fact that the aspiration of Ελένη makes position; that this is an old feature, I hope to demonstrate elsewhere. (Note the excellent rhythm of the line, all word-ends falling on 'caesurae'.) The conclusion is that ἡύκομος belongs to the oldest elements of the epic tradition.

The forms of ἡύς are a remnant as well as the compounds with ἡυ-. 'Hύς occurs only in ἡύς τε μέγας τε $(6\times)$ and ἡὺς θεράπων (before the penthemimeres, $2\times$); ἡύν in ἡύν τε μέγαν τε $(3\times)$ and once otherwise (Z 191); ἡύ only in μένος ἡύ $|(6\times)$. This conveys the impression that the form with ἡ- was retained only in the formula with μέγας (after the hephthemimeres; for the formula type cf. Fέργον τε Fέπος τε, π(τ)όλεμόν τε μάχην τε), and perhaps with θεράπων (cf. θεράπων ἐύς $4\times$) and μένος.

Now it is not impossible that we have here a very old metrical lengthening, which was (from the compounds) secondarily introduced in an adjective that itself disappeared from the living language. But all together it is to my mind far more probable that the $\mathring{\eta}$ - is an old form of the living language (introduced in compounds, as was the $\mathring{\varepsilon}$ - of $\mathring{\varepsilon}\acute{u}\varsigma$; see below), preserved in a few old formulae. This seems confirmed by $\mathring{\eta}\acute{\varepsilon}\alpha$ $\mathring{\alpha}\gamma\alpha\vartheta\acute{\alpha}$ Hsch., if it is not a recent epic form.

That ∂v had a laryngeal is not certain. It is frequently connected with the root of 'to be' as $\hbar_1 s$ -u-. But firstly this connection is not certain, and secondly it is not certain that the root of 'to be' had a laryngeal (see p. 91). In fact $\delta \gamma_1 \dot{\gamma}_1 \dot{\gamma}_2$ could be more easily explained by su- than $\hbar_1 su$ -. I do not understand what Schmitt (n. 530) means when he says: "oder erklärt sich die griechische Kompositalform δ - gar als Reflex des anlautenden σ_1 -??" The form δv - in compounds must then be ascribed to influence of the adjective, as must $\dot{\gamma}_1 \dot{\nu}$ -. That $\dot{\nu}_1 \dot{\nu}_1 \dot{\gamma}_2$ escaped transformation to $\dot{\nu} v$ - was due to the fact that the composition was, at an early date, no longer clear.

The supposed genitive $\tilde{\epsilon}\tilde{\eta}\circ\varsigma$ ($\tilde{\epsilon}\tilde{\eta}\circ\varsigma$) is too doubtful to be used as a basis for conclusions. The same applies to $\tilde{\epsilon}\acute{\alpha}\omega v$.

Schmitt, o.c., p. 144 f., rightly regards δωτῆρες in 9 325 δωτῆρες ἐάων as a hybrid form (as does

Now ἡύς beside ἐύς together with Hitt. aššuš supposes three ablaut forms; for this phenomenon cf. p. 195 s.v. κάλαμος. I can imagine this most easily as *ḗs-u-s *ḗs-u-m *es-éu-s. For the full and reduced grade of the root I refer to the discussion of εὐρύς above. The lengthened grade is less known, but I think we have decisive evidence that it did occur for the word *uesu-. In Celtic we find Ir. fiu, W. gwiw 'worthy', Bret. gwiou 'merry' and Gaul. Uisu-rix, Bello-uesus, Sego-uesus, which all have *uēsu-; WP I 310; Pok. 1174; Lewis-Pedersen, p. 18 (not changed in the 1961 supplement). The assumption of a form *ēs-u- as a basis for ἡύς therefore seems allowed.²

p. 66. ($\tilde{t}\sigma\sigma\varsigma$). A verse-end vhòς fíσης was clearly avoided. When the fifth metron was followed by word-end, it is very often a dactyl, very seldom a spondee. K. Meister, Die Homerische Kunstsprache, p. 7, lists only ten instances, half of which are probably due to recent contraction (e.g. $\mathring{\eta}\tilde{\omega}$ $\tilde{\delta}\tilde{t}\alpha v<\mathring{\tau}\mathring{\eta}\acute{\omega}$ $\tilde{\delta}\tilde{t}\alpha v$). Even more important is that in these cases the tenth element is always long by nature, not — as in vhòς $\tilde{t}\tau\tilde{t}\sigma\eta\varsigma$ — by position. The only conclusion I can draw from these facts is that an ending like vhòς $\tilde{t}\tau\tilde{t}\sigma\eta\varsigma$, which must be old, was allowed in earlier epic but avoided later, and that in this particular case the metrical anomaly was removed even at the cost of a non-existent form ($\tilde{\epsilon}\tilde{t}\sigma\eta\varsigma$) in order to keep the formula. If this view is correct, then we have in this old formula a trace of an old metrical licence that later disappeared wholly. Cf. the Add. to p. 108 f.

p. 87 f. Important would be the form *eluzanem* 'to make come up [of plants]', if it belongs with ἐλεύσομαι ἐλεύθερος, which is a good possibility; see Solta, *Stellung d. Armen.*, p. 244. This would seem to confirm the view that the original colour of the laryngeal was retained. However, in the middle of the word there is no evidence for this, cf. *alawri* 'mill' < *alatrio-, cf. Gr. ἀλετριο-, which is derived from the root $*\hbar_2 el\hbar_1$ -.

p. 108 f. νηλίτιδες. For νηλείτης (Antim.) and νηλεῖτις see now LSJ Suppl. The forms given there support the interpretation given in the text.

The form (νηλειτ)-έες is the more probable, since the fifth metron when followed by word-end is very often a dactyl, very seldom a spondee; according to K. Meister, *Die Homerische Kunstsprache* p. 7, there are only ten instances of which five can be resolved. Cf. the Add. to p. 66. (In the archaic formula so reconstructed the form είσι is surprising; it might replace ήσαν.)

Chantraine, *Dict. Etym.*, s.v. δίδωμι A 2). It must be a transformation of δοτῆρες after δῶτορ (ἐάων 9 335), which form fits in after the bucolic caesura. It is then also clear why δοτῆρες was not used: it would have violated Hermann's law.

² Dr. C. J. Ruijgh, who was so kind as to give me his view on the problem by letter, is also of the opinion that the $\hat{\eta}$ - is old. He thinks, however, that it originated in a neuter, comparing $\tilde{\eta}\pi\alpha\rho < i\bar{e}k^{\mu}r$ (and $\gamma\omega\nu(\alpha)$, if it were cognate with $\gamma\dot{\phi}\nu\nu$ as $*\hat{g}\bar{o}n\psi$ -). I doubt whether we have evidence for lengthened grade in the neuter of adjectives.

p. 168. A clear instance of $o\hbar_2 > \bar{o}$ (ω) is πτήσσω πτώσσω. The root has in Greek the forms $\pi\tau\eta\kappa$ - $< \pi\tau\bar{u}\kappa$ -(Dor.)/ $\pi\tau\omega\kappa$ -/ $\pi\tau\bar{u}\kappa$ -. A cognate is probably found in Arm. $t^\epsilon ak^\epsilon$ -cim 'to conceal oneself'. If it is assumed that \bar{u} comes from PIE $e\hbar_2$, ω must have arisen from $o\hbar_2$. Analogy being virtually excluded, the only alternative is to assume \bar{a}/\bar{o} as such for the proto-language. At present, however, a phoneme \bar{a} can only be taken into consideration if a laryngeal is impossible.

As for $\beta\omega\mu\dot{\circ}\varsigma$, see for the semantic side Chantraine, *Dict. Etym.*, s.v.; as this etymology seems indisputable, this word alone suffices to prove the development $o\hbar_2 > \omega$ (which Chantraine does not accept). (The line of development of the meaning of this word must have been something like this: 1. step, pace > 2. step up > 3. step (of a staircase) > 4. raised place, platform (, tribune) > 5. base, pedestal > 6. altar. For $\beta\omega\mu\dot{\circ}\varsigma$ we find beside 6. only the meanings (4 and) 5 in Homer (see Chantraine, *l.c.*), but there is — beside OP $g\bar{a}\vartheta u$ - (see Frisk s.v. $\beta\omega\mu\dot{\circ}\varsigma$) — a parallel that shows the meanings 1, 4, 5 and 6: $\beta\tilde{\eta}\mu\alpha$; even in modern Greek this word has both the meanings 1 and 6. Another form of the root $\beta\bar{\alpha}$ - shows a similar development: $\beta\dot{\alpha}\sigma\iota\varsigma$.)

p. 178. Καυλός: αὐλός, κμέλεθρον: μέλαθρον and perhaps γλαύκη· φοβερά Hsch.: λαύκη· ... φοβερά ... Hsch. could be added to the instances given by Kuiper, Μνήμης χάριν, p. 213 n. 9. As regards κόγχναι: ὄγχναι reference may also be made to the variant ὄχνη (see LSJ). Although incidental explanations are not inconceivable here (κόγχνη "perhaps from false division, cf. οὖκ ὄγχνη Od. 24.247" LSJ Suppl.; ὄχνη by dissimilation from ὄγχνη, Frisk), it seems more probable that both phenomena point to a substratum word. These words are then important insofar as they demonstrate that the interchange k/zero and the prenasalization (p. 12) belong to the same linguistic stratum. At the same time the connection of (κ)αὐλός with the Lithuanian words may be of far-reaching importance to the interpretation of the substratum. Finally, reference may also be made to the roots *psam-: sam-, sab(h)- in ψάμαθος etc. (cf. p. 189 f.), where the interchange p/zero may be a parallel of the k/zero discussed here.

I might add κονίς: Arm. anic 'egg of lice'. Frisk tries to account for the different forms found in other IE languages by "volksetymologische, euphemistische, tabuisierende Veränderungen und Verdrehungen" and proposes for anic *synid-s. Solta, Stellung d. Armen., p. 122, holds that Armenian by its prothesis stands entirely alone. To my mind here again Greek and Armenian are most close to one another, if we accept the interchange k/zero. (For non-IE elements common to both Armenian and Greek see Solta, l.c., pp. 119 n. 3, 405, 430, 463 n.; cf. also p. 194 of this book, on γέφυρα.)

p. 194. On the pre-Hellenic labio-velars see now Kuiper, *Lingua* 21 (1968) 269-77 (on θάλπω: θαλυσσόμενος θαλυκρός and ἄνθρωπος).

p. 198. See addendum to p. 202.

p. 202. Myc. demeote PY An 35 ('demeontes') 'those who will build' points for δέμω to a root demħ₁-/dmeħ₁-. See Chantraine, Morphologie², p. 249, who comments that classical Greek has no future of this verb and that "les formes en ā d'écrivains doriens ne doivent rien représenter d'ancien". In Pindar there are variants with η for θεόδμᾶτος. (This is dealt with in the greatest detail by C. J. T. Mommsen, Annotationis criticae suppl. ad Pind. Ol., Berlin 1864, ad O. 3.7: "Est cur praeferas θεόδμητον, cum a δέμω formatum esse videatur. Ut hic Moschopulus, ita O. VI, 59 Triclinius η scripsit. P. I, 61 duo codd. η praestant, sed P. IX, 10. I.V, 10 omnes in ā consentiunt ... Hoc loco Vaticanus η; is etiam vs. 1.4.12.13 formam melius servavit quam Ambrosianus". Snell does not give the variants, and Bowra gives them only for O. 3.7 (mss. BC). Of the two times that the word occurs in the fragments, 78-79.1 Bo. = 33 c 1 Sn. give -δμήτα M, corr. Boeckh; for 167 Bo. = 35 c Sn. only Rumpel (Lexic.) gives ā Bergk, vulg. η. Forssman, Unters., who specially examined $\bar{\alpha}/\eta$ in Pindar, calls (p. 160 n. 4) Fr. 33 c 1 Sn. a case of "un-doric η", but does not discuss the other cases.)

If this is correct, then $\delta \dot{\epsilon} \mu \alpha \zeta$ probably replaced * $\delta \dot{\epsilon} \mu \dot{\epsilon} \zeta < *dem \hbar_1$ -s.

As regards κτέρας, it may be added that the forms with ε are very old. In Homer one finds the verb κτερεῖζω, which must have been derived from the ε-forms of κτέρας. This verb occurs in the formula $[\sigma \tilde{\eta} \mu \dot{\alpha} \tau \dot{\epsilon} \ oi \ \chi \epsilon \tilde{\upsilon} \alpha \iota \ (\chi \epsilon \dot{\upsilon} \omega)]$ καὶ ἐπὶ κτέρεα κτερεῖζαι (-ξω). The fact that this is an old formula is evident from the transformations with the more recent forms κτερίσαιεν Ω 38 and κτερίσειεν γ 285, and from the guttural declension. Ruijgh, *L'élém. ach.*, p. 83, and Hoekstra, *Modifications*, p. 143 (and p. 142 n. 1) are therefore both of the opinion that the formula is of Mycenaean origin.

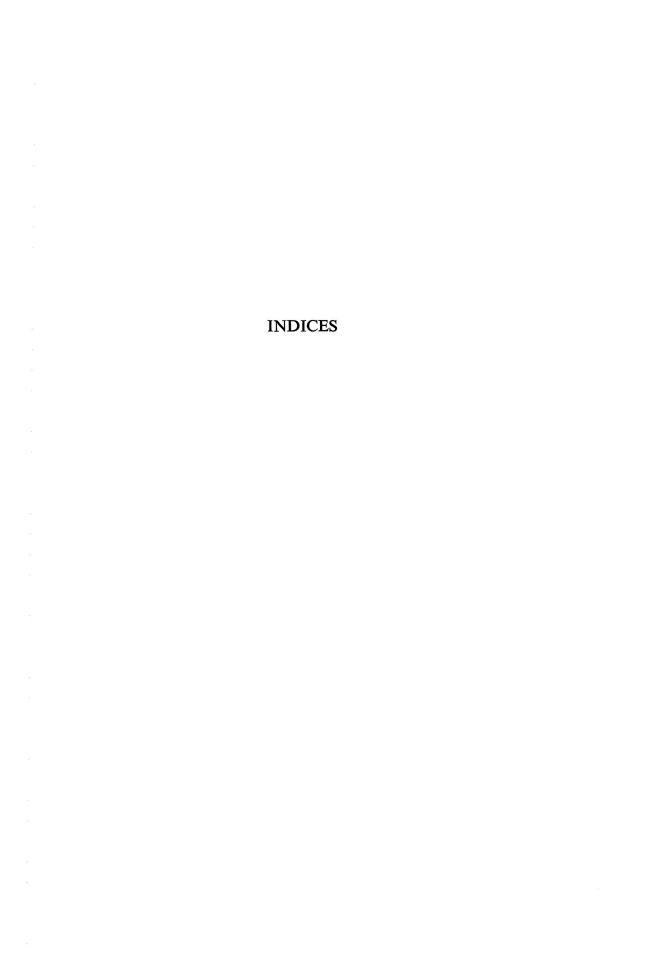
One may therefore still expect the old nominative ending in -es (-ες) in Myc. An all the stranger form is kowo. It may be interpreted as ' $k\bar{o}w\bar{o}s$ ' (* $k\bar{o}w\hbar_1$ - $\bar{o}s$, cf. γέλως < * $gel\hbar_2$ - $\bar{o}s$) or ' $k\bar{o}wos$ ' (* $k\bar{o}w\hbar_1$ -os).

On the strength of the above I would now be inclined to be somewhat less sceptical vis-á-vis the hypothesis given on p. 202.

- p. 218. If the glosses τέτορεν ἔτρωσεν and τετόρη τρώση Hsch. are reliable, they possibly provide a further instance of $r\hbar_3 V > \text{op } V$. The explanation found in Hesychius suggests that the forms are a rists. They must then be reduplicated thematic a rists of the type τέ-τμ-ον πέ-φν-ον. The o-vocalism can be explained if the root is the same as that of ἔτρωσα, i.e. *ter \hbar_3 -, because we would expect a basic form *te- $tr\hbar_3$ -e > τέτορε. It may further be noted that the absence of augment probably indicates that the word is taken from epic poetry, so that the form may well be ancient.
- p. 220. The stem γνη- is also found in ἴγνητες 'αὐθιγενεῖς', from *ἐν-γνη-τ-; cf. ἑτερόγνητ- 'ἑτερογενής' Hdn. Gr. 1.83 (ἑτερογνής Schwyzer, p. 451). The form ἴγνητες is apparently old: its translation in "modern" (classical) Greek, its meaning ("the *original* inhabitants", e.g. of Rhodes); $\iota(v) < en$ Arc.-Cypr. For the com-

292

- pound compare the Homeric formula τοὶ Ἰλίφ ἐγγεγάασι (Z 493 P 145). For the zero grade compare ἀδμητ- $< *p-dmh_2-t$ (Av. ašbəret- < *-bhp-t-).
- p. 222. (τέμενος) That the word was derived from τέμνω is confirmed by the use of ἀποτέμνω Hdt. (LSJ s.v. II 2) and ἀπότομος Locr. V B.C. (idd. Suppl. s.v.) in the sense of 'to cut off land (for private use)'.
- p. 223. However, o for α in the neighbourhood of ρ λ μ v seems to rest on a general tendency in Aeolic (Thumb-Scherer, *Gr. Dial.*, II p. 87 f.). It can hardly in all cases result from the development of a PIE sonant; cf. ψόμμος, δόμορτις, γνόφαλλον, κόθαρος.
- p. 230. Of importance for ὄνομα is H. Rix' article, MSS 18 (1965) 79-92, in which he convincingly argues that the o of the root in the Latin gen. *iocineris* is old and was not introduced from the nominative, of which the oldest form is *iecur*, not *iocur*. I am not convinced that the details of Rix' reconstructions (which he gives with due reservation) are right, but the important fact remains that we have here o beside e in the root of a neuter noun, which, as *enħ₃-mŋ, has zero grade of the suffix in the nominative. The o-grade is also found in ov θ a ρ (<*(\hbar ₁) $ou(\hbar)dh$ -r).
- p. 252. (pṛṇáti) Puhwel, Laryngeals and the IE Verb, p. 39 f., points out that Armlnum and OIr. do-lin seem to confirm that the root *ple h_1 had an old nasal present.





I. MODERN AUTHORS

Only the more important places are given

Wyatt 5n

Adrados 29f Austin 22, 78, 80f, 86, 94, 107 Benveniste 89f, 130, 152, 186, 202 Brugmann 1, 139, 150, 210, 241 Chantraine 3, 24, 73, 117, 245 Cowgill 3, 6, 14, 80, 91, 96-8, 107, 130n, 185, 196, 203, 206, 209, 212, 214-7, 230, 244f Cuny 5n, 7n, 203 Forssman 98n Frisk 2, 12, 24, 27, 45, 51, 73, 215n, 236, 247 Hammerich 81 f, 96, 174 Hamp 4, 19f Hiersche 3-6, 181, 194, 217 Hirt 89f, 134, 138n, 139, 203, 210, 242 Hoekstra 61 Hoenigswald 82f Krahe 135f, 190 Kuiper 7f, 11f, 13n, 41, 57, 75f, 129n, 145f, 152, 158, 171, 174n, 177, 179f, 186n, 187, 189f, 194-7, 201-5, 208, 216-8, 226, 236, 243, 249 Kuryłowicz 4f, 6f, 23, 31, 74, 90, 93f, 108n, 115, 122-4, 133-5, 145, 166f, 173, 175, 180f, 203-6, 209, 211-3, 242

Lehmann 5n, 6, 96f, 160, 217 Leumann 49, 77, 121, 137, 175f, 243 Meillet 23 f, 90, 140, 149, 153, 226, 250 Moorhouse 98, 103f Nikitina 80-5 Pedersen 4, 7, 11, 138n, 153, 171, 179 Puhvel 4n, 103, 108 Risch 148f Ruijgh 98, 133, 168, 223n, 224f Ruiperez 133, 217, 221, 240 Saussure, de 1, 115, 133, 179, 186, 210, 238 Schwyzer 113-5, 210 Seiler 25-7 Smit 204, 243 Strunk 278-81 Sturtevant 4, 7, 94, 107 Szemerényi 23, 35, 37-40, 44-7, 51, 56, 70, 73, 177n, 230n, 256, 271-4. Vey 209 Wackernagel 114, 156 Winter 23 f, 27-9, 57, 115n

II. SUBJECTS

Only the more important places are given

```
ablaut 56f, 89-92, 95, 103, 108-10, 123n, 127, 131n, 139ff, 166f, 174-6, 183, 198-201, 203-16, 219,
    236f, 244, 248f; in nominal inflection 8, 10-2, 20n, 35, 37, 44-7, 57, 65, 128, 140, 153, 155f, 158,
    165n, 168f, 171, 179f, 183f, 195-7, 201f, 228-31, 234f, 246f; of prepositions 27, 128
adverbs, in -\alpha 152-4, 159, 208n; in -\tau1 160
aorist, thematic 132, 224-6
assimilation 70f, 238
augment 168, 170-2
division, false word — 26, 48 f, 54, 58-61, 77, 89
endings, case —: voc. sg. 147-51; instr. sg. 146; fem. sg. 155; nom. du. 147, 158; nom. pl. ntr. 152,
    157; verbal —: 1 sg. pf. 133, 168; 2 sg. pf. 181; 1 pl. Med. 152; -θης 181
enlargements 56f, 87, 178, 191f, 261, 281f
Homeric problems 58-66, 77f, 80f, 100n, 101, 108-10, 119, 148-50, 156, 158f, 275-7, 280f, 285-90
laryngeals, in Homer 79ff, 146; in Latin 47n, 130, 133, 157, 220f
presents, conj. — 41, 236; nasal — 44, 130n, 250-3, 279; with o-vocalism 44, 131n
reduced vowel, PIE 11, 29f, 47, 57, 94, 112, 207-9
reduplication 113-24, 129f
substratum elements 12f, 18f, 23, 30-2, 34, 36f, 39-42, 44, 48-55, 71f, 129n, 134, 167, 177f, 181, 189f,
    192-5, 197f, 200, 216, 290
syncope 39f, 44, 46
```

III. LANGUAGES OTHER THAN GREEK

Only the more important places are given

A.	Albanian	p. 298	H.	Iranian	p. 305
B.	Anatolian	p. 298	I.	Italic	p. 306
C.	Armenian	p. 299	J.	Phrygian	p. 307
D.	Baltic	p. 300	K.	Slavic	p. 308
E.	Celtic	p. 300	L.	Other languages	p. 308
F.	Germanic	p. 301		1. Other IE languages	p. 308
G.	Indian	p. 302		2. Non-IE languages	p. 308

The languages are grouped into families and these are arranged in alphabetical order.¹
For all languages the same alphabetical order has been adopted, that of the Latin alphabet.²

For the alphabetical arrangement not only the accents but all diacritical signs are neglected³ (only where words differ in nothing but diacritical signs they are arranged in order of the complexity of these signs⁴).

¹ Sometimes these families are arranged geographically or according to the numbers of words listed. The first must necessarily be approximative, the second will vary from book to book.

Indices and alphabetical order exist for the sake of convenience. The use of these lists is, however, hampered by the fact that several languages have rules of their own. As with the exception of Greek all languages are translitterated into the Latin alphabet, it is evident to follow the order of that alphabet. As most spellings are neither phonetically nor phonemically satisfactory and as the order of the Latin alphabet is not based on any logical arrangement of sounds but is only a matter of convention, there is no reason to make exceptions based on whatever principle. The advantages of uniformity will be evident, I think, and it can be easily obtained. It was for that same reason that the original scripts were translitterated into the Latin alphabet. This advantage should not be undone partially. Conflict with the tradition then is unavoidable, but it is hoped that the advantages in the ease of consultation will outweigh this draw-back. For Armenian the order of the Latin alphabet is now generally adopted.

Accepts are generally neglected, as is the macron. As accepts are sometimes identical with dia-

³ Accents are generally neglected, as is the macron. As accents are sometimes identical with diacritical signs (e.g. \tilde{r}, \tilde{n}), it appeared desirable to neglect them, the more so as in this book the following varieties of e are found, that would all have to be grouped separately: $e, e, \dot{e}, \ddot{e}, \ddot{e}, \ddot{e}$. It would be creating a new inconsistency if only *consonants* with these signs were treated independently.

⁴ Though one might dispute the details, I propose the order of signs as on the following letters:

It may be pointed out that this order is not very important as the words concerned are now listed one after the other, so that the different forms can be seen at the first glance; when the signs are not in the first instance neglected, otherwise identical forms could appear at quite different places in the lists.

Two letters representing a single sound are nevertheless treated as two letters: ch = c + h, x = a + e, etc.⁵

Compounds are always classified according to the letters of the first element.6

Letters not taken from the Latin alphabet are inserted after the Latin letter with which they are associated most closely:⁷

$$a, b, c, d, \delta, e, \partial, f, g, h, h, i, b, j, k, \chi, l, m, n, o, p, q, r, s, t, b, \vartheta, u, \delta, v, w, x, y, z.$$

A. ALBANIAN

ândërr 20, 46, 131	lênd 195	nyerí 20
emën 20	lig 20	pa- 128
emër 20	llânë 20	peshkëp 20
ëndërrë 20, 46	llërë 20	plog(ët) 26
erë 20	lyej 20	rjep- 36
im 20, 43	mik 20	sy 20
jam 47	myel 20	tjetër 47
jashtë 47	nëndë 20	tri 157
le(h) 20	nìp 20	vier 57

B. ANATOLIAN

Hittite not labeled8

ammuk 43 annar- Luw. 45 -anzi 251 arnuzi 35 aššuš 53, 289 daluga- 238 edmi 91 e-eš-zi 91 e-it-mi 55 epmi 111 genu 168	ha-an-te-iz-zi-iš 127 ha-lu-ga-aš 92 hannas 45 hanti 127, 135, 267 hanza 45 happinant- 51 hapzi 51 haraš- 130 har-aš-zi 129 hark- 34 harkiš 34, 127, 267	hartagga 35, 133 hasdyeir 24, 131 hastai 130, 267 hatugi- 127 hawa- 130 hawi- Luw. 130 hi-iš-hi-ja-an-ti Luw. 97 hyanteš 267 hyiš- 129 hu-i-iš-zi 57, 93f, 273 huitiazi 56, 93
•		huitjazi 56, 93 hullai- 236

⁵ See note 2.

Though this has not been realized in the text, I am of the opinion that the signs $h \not : u \not s$ in Hittite words should always be written h y w s.

⁶ It would be in conflict with the principles stated specially in note 2 to classify compounds otherwise than according to the first letters.

The arrangement followed here is founded on the basic form of the letters, while diacritical signs are neglected. It is clear, however, that e.g. θ is a separate symbol; and as θ is an inverted e, it is only natural to put it after e (as is done in Armenian words). Similar considerations apply for the other symbols.

In accordance with the principles stated above (p. 296) g and q have not been put together with k; the same applies to b, p and d, t. The same treatment is found in Schwyzer's Register. Thus \underline{i} is found under i. Spellings like e-es-zi are treated as eeszi, not according to their probable pronunciation (eszi).

B. Anatolian

hu-u-i-tar 107 hu-u-wa-an-te-eš 57, 93f innar- 45 išhai 18n, 82, 86, 97 iš-ha-ma-in 86 iš-ha-mi-ja-an-zi 86 ishianzi 175 išhunau- 86 išpant- 18n ištantanun 18n iugan 97 kata(n) 219 kati- 219

kieššar 276n -\taa Lyc. 133 \tilde{\chi}tawata Lyc. 127 la-a-ma-an 93, 230 lahhuwai 232 lamnija- 230 linkzi 41, 93 nakkiš 93 nepiš 74, 93 ninink- 45, 93 pahhšmi, -zi 166, 168, 173, 272 pas- 272

ša-(a-)ku-wa 83

šanhzi 236 šankuiš 47 še-e-hur 76 še-eš-zi 55 tarhzi 239 tuhhuwai- 169 yarša- 93, 97, 273 yatar 67 ú-e-eš-tin 93 ú-ek-zi 93 yeš- 79 ú-it-ta-an 93 wa-aš-ša-an-zi 55

C. ARMENIAN

ač-k° 20, 158 aganim 57, 79 akn 140 aławni 40 aławri 289 ałbiwr 21, 88 aliwr 234 ałk'at 22, 42, 87 ał(t) 134n ałuēs 22, 40, 87 am 22 amarn 22 amb 74, 140 amis 22f, 47 anic 290 anicanem 22, 46, 87 anun 22, 47, 229 f anurj 22, 46, 87, 131, 140 araspel 50, 85 arawr 140 arev 22, 88 arnum 35 art 139 artasuk^c 21, 88 aru 21, 88 astł 22, 51, 87 atamn 22, 55, 87f, 140 ateam 140 aud- 67 avelum 56, 87 awr 22, 46n, 202 awt^c 57, 127 ayr 22, 45, 87 aytnum 140 çin 19 cung 46

eker 212, 227, 234, 282 ełbayr 21, 88 ełungn 47, 87 eluzanem 289 erank^c 21 erastank' 21, 88, 216, 247 erēc 88 erek 36, 87f erek' 21, 88 eresun 160 eris 22 erkan 21, 88 erkar 88 erkn 54, 88 erknčim 88 esan 140 gełmn 195 gom 23, 76, 93 gorc 76 haci 140 haik 140 han 45 hav 57, 128 hołm 229 hot 131 hototim 131 hoviv 130, 140 ijanem 130 inn 22, 45f, 87f jaunem 140 jukn 19, 23 kalin 195 kamurj 194 kanay- 147n, 177 k'san 23 lar 64

li 174 lk'anem 22 **Inum 292** loganam 22, 232 loys 22 luanam 21 mēg 22, 44 mełk 42 mēz 22, 43 mis 23 mizem 22, 43 moranam 109 mukn 19 nerk'-(in) 24, 45 nor 22 oč 105, 112 ołb 42 olok^c 22 orb 131 orcam 36, 87f ori 140 oskr 140 ost 130, 140 otn 47 sin 287 -spel 50 t'ak'cim 290 tasn 22, 46 ti 174 unkn 47 uranam 35 y-areay 140 yarnem 140 y-avelum 56, 87 yesan 140 z-aud 67

D. BALTIC

Lithuanian not labeled

akì 158	júostas 97	śárka 196
alkū́nė 22	kálti 38	saũsas 135, 178
alpstù 83	kándu 190	sérgiu 63
ántis 197	kárti 199	sérgmi 63
ap-répti 36	kárvė 198	šérti 231
ar Latv. 33	langāt Latv. 41	sìlpnas 83f
ar̃ 33	lengvas 41	slãbnas 84
arelie OPr. 130	lìmti 110	slabnùs 83
*arelis OPr. 130	málti 198	slýsti 84f
arelis 130	márgas 239	spìrgti 197
ariù 231	miltai 198	spiriù 50
árklas 231	mirštù 109	spragà 197
ašìs 139	mùlkis 198	sprãgė 197
aštras 128	nar̃sas 241	spragěti 197
áugti 89	ne- 105	sprógti 197
aũti 79	nėsti 105, 110	spùrgas 51, 197
aysmis OPr. 128	niẽkas 105	stãgaras 50
balžiena 192	nóras 75	stegerỹs 50
dárbas 191	nuõ 208n	stìngti 192
darýti 191	pa- OPr. 128	svarùs 84f
debesis 74	patì 155	sveriù 56, 84f
dėlė̃ 175	pa-žintas 166	svìlti 62, 85, 201
deréti 191	pelt Latv. 50, 85	tîgas Latv. 192
dīle Latv. 175	piemuõ 12	tìnti 190
dìrbti 191	pilìs 218	tinù 251
emmens OPr. 47, 229-31	pìlnas 203, 219	trinù 237
erēlis 130	pìrmas 214	trobà 191
èrglis Latv. 130	plakù 200	trůts 237 Latv.
er̃žilas 39	plãštaka 200	ulbúoti 42
geniù 225	platùs 179	úodžiu 113, 131
genù 225	plóju 200	velkù 276
geriù 234	plónas 200	vémti 234
gérvė 196	plónė 200	veržiù 63
gile 195	po- OPr. 128	vežanti 155
girtas 211, 233, 282	puotà 175	vìlbinti 41
grúodas 192	rãktas 35	vilkù 146
ĩ 27	rángstus 159	vìlna 195
intė 195	ransžies 236	vilpisỹs 41
ir̃ 33	raŭkas 39	žándas 190
ir Latv. 33	riáugmi 36	žẽmė 196
iriù 234	riekiù 36	žénklas 166
javaî 97	rìmti 193	žéntas 228
-ję- 105	salme OPr. 195, 206	žmuõ 196
jegà 183	salms Latv. 195, 206	žuvis 19
jentė 195		

E. CELTIC

Irish not labeled

abann 177n	ad-ägor 131	ainm 229f
Abegnia Gaul. 244	adain W. 209	anadl W. 229
Abona OBrit. 177n	adar W. 209	animm 229

E. Celtic

araf W. 261 awel W. 57 -ball- 251 Bello-ueses Gaul. 289 blawt MW 198 blot OCorn, 198 calaf NW 195 calamennou OW 195 caru W. 198 cnāim 196 crenaim 247 damnaid 198 del 175 dēr 157 docer 197 do-lin 292 edn W. 209 én 209 Enignus Gaul. 244 eryr W. 130 feth 57 fiu 289 fo-sligim 84 garan W. 196

-garanos Gaul. 196

-gnatus Gaul. 219f gwiou Bret. 289 gwiw W. 289 gwlan W. 195 hafal W. 208 hwyad W. 57, 128 iarn 185n ilar 130 imbed 51 imbliu 44 ingen 47 insce 129n Isara 185 lám 195, 200 lán 219 lár 200 lecco 26 llawn W. 203 lod 41 luid 41 Medio-lanum (Celt.) 200 mláith 198 nech 105 nep W. 105

olann 195 rīm 34 saimlith 208 samail 208 sarn W. 211 Sego-uesus Gaul. 289 sernaim, -d 231f, 252 srath 211 talam 229 tamnaim 251 tanae 191 Tanaros (Celt.) 192 tanow Corn. 190 taradr W. 229 tarathar 229 tlawd W. 201 tlenaid 200 treb OBrit. 191 treb OW 191 trī 157 tri-garanos Gaul, 196 Trutiknos Gaul. 244 Uisu-rix Gaul. 289

F. GERMANIC

neu W. 104

Gothic not labeled

af 128 afl OIcel. 66, 89 afol OE 66 agis 129 ahsa 139 ainakls 244 air 34 akrs 139 āmar Alem, 96 andi ON 255 anut OHG 197 ār OIcel. 34 araweiz OHG 36 arms 36 asts 24 aukan 57, 82, 89 balko OHG 192 bealca OE 192 be-nuomen MHG 230 bolkr ON 192 cnāwan OE 166, 281 daddjan 175 drāen OHG 237 ealgian OE 40, 89

eisarn 185n enēr Alem. 96 faiflokun 200 fan OS 128 feala OE 218 felms-fullr OIcel, 237 fit OIcel. 155 flah OHG 200 flazza OHG 200 flocan OE 200 floer OIcel, 200 fluoh OHG 200 fodjan 168 frijondi 155 fruo OHG 215 fruoi OHG 215 fulls 203, 219 ga- 27 ganaitjan 46 gatamjan 198f gëwon OHG 178, 282 giumo OHG 178 gremettan OE 192 gremizzon OE 192

guma 196 halm OHG 195, 206, 240 hamma OHG 196, 240 haúrn 198 hausjan 50 hirni-reba OHG 36 hramian 199 hwō OS 146 hē 146 iusiza 287 jār Alem. 96 jesan Alem. 96 joch OHG 96 juka 157 kind OHG 228 knāu OHG 166 kranuh OHG 196 krās OIcel. 281 leger Dutch 280 leid OHG 85 leidr Olcel, 85 līdan OHG 40 lungar OHG 41

grymettan OE 192

F. Germanic

māen OHG 43 mãt MHG 43 māwan OE 43 mawi 155 melcan OE 43 meltan OE 73, 85f mikils 208 miok OIcel. 153 molda OE 215 mord OHG 207 morđ OIcel. 207 nāen OHG 86 nagal OHG 181n namnjan 230 namo 230 neib 46 neo-wihts OHG 105 nest OHG 24, 27 nih 104 niid Dutch 46 nist 105, 110 niuklahs 244 nōmia OFr. 230 nylle OE 105 ōg 113 ók OIcel. 113, 130 rakkr ON 236 rank MHG 236 raun OIcel. 36 renge OE 34 rēodan OE 36 rīfa ON 36 rigil OHG 35 rigis 36, 39 rōkian OS 34 rouwā OHG 261 run(n)a Norw. 36 rynge OE 34

sailvan 83 saíslep 124 sampt MHG 189 sant OHG 189 sceawian OE 50 schlaff ModG. 83 schlecht ModG. 83 schmerz ModG. 83 school ModE. 280 schwer OHG 83 scouwon OHG 50 senawa OHG 87n simle 208 sin ON 87n siot OIcel, 202 skaískaib 123 slaf OHG 83 slaihts 83f slakr N. 84 slāpr OIcel, 83 sleffar OHG 84 sleiba 85 slepan 83 slīdan OE 42, 84f slīđi OS 85 slīfan OHG 84 slīhhan OHG 84 slīkr OIcel. 84 slipor OE 42, 84f slipra N. 84 smelta OIcel. 73, 85f smeltan OE 83 smelzan OHG 73 smerzan OHG 84 spill 50, 85 staistald 123 stara OHG 51

stinga Olcel. 50 straujan 232 sulh OE 276 sums 208 svārr OIcel, 84f svilar OIcel, 56, 85 swāri OHG 84f sweiz OHG 277 swelan OE 62, 85 sweltan OE 85 swiltan 85 tila OHG 175 time ON 174 trahan OHG 21 bē 146 beihan 236 borp ON 191 bráwan OE 237 -brep OE 191 prins 22 uf 83 ufar 83 us-filma 237 us-stagg 50 ved OIcel, 56 vefa ON 67 wadi 56 wahsjan 57, 89 wara OHG 79 wardja 79 weban OHG 67 wedstrijd Dutch 56 weotuma OE 58 wetar OHG 57 winds 57 wisan 57, 93 wolfu OHG 146

G. INDIAN

ā 24 abodhişam 227 abhínara- 93 abhi-ṣṭaná- 192 abhīyuj- 97 abhra- 74 ábhva- 242 ádhvanīt 199, 227 -advan 54 āgas- 129 agre-gūḥ 158 ahám 180, 273

áhve 242 áicchat 171 aja-gará- 180, 234, 242 ajananta 225 ájani 10 ájati 2, 168 ájījanat 243 ájñāsam 227 ájra- 139 akar 226 akarat 226 ákāri 10

akkā 147 akramişam 227 ákṣa- 139 akṣī 158 ákṣita- 108 álpa- 81 ambā 147 ambhas- 74 ambu 74 āmīt 170 ámīti 231, 234, 252 amṛkṣat 44

G. Indian

anákti 91, 237 andhas- 118 anghri-47 ánila-229 ániti 45, 135, 139, 229 ápa 128 api- 27 ăpi 177 apnas-51 āpnóti 83, 111 áprāsam 227 áprāt 226f āra 113 árāiksam 173 árdhnot 171 arim-dama- 198 aritár-132, 234 aritra-36 árjuna-34, 127 árna-83 arpáyati 130n arpipat 130n ásat- 108 ásat- 108 asānişam 233, 236 á-śīrta- 199 aśri- 128 ásrk 174 aśrot 278 astarīs 278 ástarişam 233, 278 ásthi 179 ástrta- 204, 242 f ātí- 197 ātmá 57 attā 147 áunat 171 ávati 58 avam 96 āyu 105, 128 āyuk-97 āvih 58 bādh- 114 bhanákti 236 bháranti 152 bharantī 155 bharitram 228 bhās-10 bháti 178 bhávīti 169, 227 bhavitum 186 bhrüh 31, 56 brávīti 8 cakara 10

carkṛtí- 10, 166, 204, 242 dáma- 198 damáyati 198 damitár- 198 dāmyati 198 dán 55 dāntá-198 dāśnoti 114 dáti- 135, 174 dátra-183 dātré 12 dáyate 135 déstha 174 devatta- 242 deví 155, 169 dhána-183 dhar- 114 dhártum 186 dhārú-175 dhavítram 169 dháyati 175 dhenā 175 dhenú-175 dhītá-175 dhŭnoti 240 dhūtá- 240 dhvāntá- 187, 199 dī-242, 262 dídivi 242 dīrgha-237 dití- 135, 174 do-dhavīti 169 drāghīyas 237 drāsat 227 drāti 191 duhitár-8, 180 dváu 147 dyáti 174f Dyauh 174 gabhīrá-8 gáya-248 garat 212, 282 gariman 191 gārīt 212, 282 giráti 282 gīrņá- 211, 233, 282 g- 242 grāvā 21 grbhitá-8f, 10 grīșmá-247 grņāti 196 guráte 219 gurú- 11, 191 hanati 225

hánuh 180 hásta- 60 idhmá-129 fhate 168 ījate 168 **iksate 121, 129** ínaksati 91, 236 inddhe 67, 129 iradhanta 236 irajyati 236 īrmā 261 írte 129, 168, 172, 203 işirá-184 ișņáti 252 istá-96f íyarti 129, 168 jagāra 212, 282 jāgāra 114, 117, 121, 124 jāgarti 29 jaghnant 225 jána-10, 180, 235 janáyati 10 jánima 10 janitar- 227 janitrí 155, 228 janman- 228 jārá- 235 jarás-201f járati 201 jaritár 196 jātá- 205, 219f jāti- 220 jáyati 248 jihmá-183 jináti 248 jíryati 201 j(i)yá 248 jñātá- 166, 211 júryati 201 kaláyati 38 kāmaprá- 244 kāñcana- 190 kaví-50 khanati 20 khani- 20 khidati 135 kīrtí- 10, 166, 204, 242 krátu- 249 kravís- 201 f krĭnáti 240, 247, 279 krūrá- 201 kṣāḥ 196 ksáyati 19 kúrdati 240

G. Indian

laghú-41 lavítra- 171 likháti 36 lināti 84 līyate 84 lunáti 171 -madhi 152 máhi 153 mahiman- 10 mahīyas- 255 mahnā 255 māmri- 124 mánāmsi 8, 152, 267 manas- 10 márdati 43 mardayati 83 márīci 149 mārjmi 44 máti 183 meghá-44 meha- 43 mrdú- 42 mrnákti 44 mrnáti 198 mrsyati 109 mrtám 207 mūrchati 198 mūrdhán- 215 mūrkhá- 198 mūrtá- 243 nábhas-74 nābhi- 44 naca 104 naciram 105 nakhá- 47, 181n nákis 104 náksati 236 nāma 229f -nāman 47 námāni 8 namura 105 napumsaka 105 nar- 45, 75, 94, 132 naś- 94, 169 násati 236 navā 104 nīdá 27 ní-śi-tā 242 ójas- 40 pādayati 10 pámi 11 pānam 177 pánthāh 9f, 156, 179 pári 27

páriman 235 parinas 235 parītta 242 paścā 146 pātár- 175, 177 pátnī 155f pátram 166, 175, 177 pavitum 188 pāyáyati 175 pāyú 105n, 173 páyate 169, 177n phála-56 phalati 56 pi- 27 pibati 176 píparmi 235, 245 pipyúsī 169 pītá- 175, 177 pitar-8 pītí- 175, 177 pívarī 155, 169 plávate 21 prāņá- 219 prātá- 219 prātár- 215 pratīc- 129 prátūrti- 242 prāyas- 174 préstha-10 prnati 251f, 279 prnáti 235, 251, 279 prnīhi 279 pŕśni- 247 prsthám 247 prthiví 155, 249 prthú-9, 179 punáti 180 púr 218 purás 215 pūrņá- 174, 203, 219, 235 pūrtá- 211, 233 purúcid 157 pūrvá-214 pūrví 241 pūryate 235 púşyati 55 pyáyate 169 ráksas-36 ráksati 40, 89 rārak- 124 réjati 41 riņāti 38 rísyati 36 rjati 37

rjrá- 34, 183 rņákti 236 rñjáti 130n ró(d)hati 41 rșa-bhá- 91 rudh-94 rudhirá-36 ruh- 44 sa- 24 sádhis- 202 sám 24 samá-154, 208 sāman-86 śámī 146, 208 śamnīte 201 śankhā- 181n sanóti 236, 279 śāntá- 201 sanutár 83 sápati 83 sárati 83 śārikā 196 sasmāra 124 sasvāna 124 sāta- 236 satí 155 śī- 242 śikṣānará- 93 simá-154, 208 sina- 236 síra- 175 śiras 198 sítā 175 snāvan-86 snāvati 87 snāyu-87 sphuráti 50 sphūrja- 197 sphúrjati 51, 197 śrathnáti 180 śravas- 153n sravát- 239 śrnáti 197 śrngam 198 śrnthati 180 śrotum 186 srutí- 21 śruvam 226 stanáyati 192 stāyú- 173 stená-173 stiyā 192 stīrņá- 204, 211, 231, 242

rjí- 34

G. Indian

str- 245 str- 245 str-bhíh 87 strnáti 232 strnóti 232, 240 strta-280 styávate 192 su- 53 sūnára-75, 93f, 267 sūnrtā- 93 sūrmí 240 śúska-135f, 178 súṣūta 242 súsuti- 166, 242 sūtí- 242 sūyáva-97 svádana- 167 svādvī 158, 179 svajana- 244 svajāta- 244n svargá- 201 svastara-231 śvitīci 129 syáti 86, 87n, 97, 175 takṣṇi 155 támisrā 208 tanakti 236 tanóti 236, 279 tanúah 10 tanví 190 tār-ah 87 tárati 239 taritum 186 tarku- 51

taruņa-192 tātrpi-126 tavīti 249 tigitá-9 timirá-10, 208 tiráti 239 tīrņá- 239 tisthati 97, 123, 168 tráyah 21 trí 157 -tūrti- 211 tuvigrá- 242 tuviș- 249 ud-gūrná- 219 ugrá- 57, 89 uks- 89 úksant- 57 umbháti 67 unábdhi 67 unátti 67 ürdhvá- 241 úri- 241 ūrjá 241 űrṇā 195, 239 urú- 65, 287 uru-cakşas- 150 usás 65 uśatí 155 vádati 56, 89, 127 vaks-89 vaksáyati 57, 128 vámiti 111, 116, 234 vánitā 10

varşam 64 vársati 76 vas- 'to dress' 124 vas- 'to stay' 124, 129 vaś- 124 vásati 57f, 89, 93, 128 vasná-58 váste 79 vāstu 58 vásu- 287 vấti 57 vátsa-276 vāvrs- 124 váyas-57 vejate 58 vidúșī 155 víh 57, 128 vijate 58 viśvánara- 93 vītá- 239 vratá-238 vrkíah 10 vrnīté 8 vrs- 94 vyáyati 239 yábhati 55, 97, 131 yáh 96 vákrt 174 yastá-96f yātar- 195 yudh-97 yugá 157

H. IRANIAN

Avestan not labeled

äfsad Oss. 21n
ainivan- 229, 255
airime 261
antya 255
aojah- 40
arma- Choresm. 261
armaē-šad- 261
aršan OP 91
ärtä Oss. 21n
aša- 234
ašbərət- 292
aši 158
aspō-gara- 234
asruštiš 110

awra- 74 ayarə 34, 95 ayc 128 azgata- 108 āzi 168 āzna- 244 čī 157 darəga- 237 drang MP 209 dugdar 9 ərə&wa- 241 ərənav- 35 ərəzi 39 gā\theta- OP 290

váras- 65

gərəpta- 8f, 10 ham 83 hampafrāiti 245 hištaiti 123 hujyāti 248 hunara- 75 huvnara- OP 75 izaēna- 128 jafra- 8 kaēnā 167 kamərəða 215, 241 /manāh/ 152, 267 manå 8, 152, 159 masah- 183

H. Iranian

ab 128

masišta-183 masyå 183 mazdaam 10 mraoiti 8 nabah-74 naēčiš 104 nāman 8 naptya- 45 pa- 128 pantam 10 pascā 146 paskāt 146 perena- 241 pərətu- 239 pita 8 rāna-21

rənjaiti 41 sčandayeiti 189 snāvarə 86 spad Sogd. 21n sparəga- 197 sraoša- 110 starəta- 204, 211 stərənaoiti 232 stərəta- 204 -taret- 211 urvāp- 287 urvăta- 238 uxš- 89 varənā 195 vaxš-89 vərənte 8

carinare 134

vīš 57
vīsaiti 62
vouru- 65, 287
vouru-caśāni- 150
xrūma- 201
xrūra- 201
xšaçapāvan- 18
xvarənah- 201
xvēng 175n
yava- 97
yāsta- 96f
"y'npt Sogd. 97
zå 196
zāta- 219f
zīzanənti 243

I. ITALIC

Latin not labeled

ad 83	ca
aemidus 140	ca
ager 139	ce
ago 50, 82, 89, 111, 128, 134	ce
(s. egi)	ce
albus 40, 80	cla
amicus 20	co
anamúm Osc. 229	co
anas 197	co
animus 45, 110, 139, 229	co
anouihimu Umbr. 79	cri
anus 83	cui
apiscor 111	de
araneus 34	de
arceo 35	Di
arduus 241	do
argentum 127	ea
audio 57	eg
augeo 57, 82, 89, 128	eg
augustus 40	en
auris 140	ep
aurora 65, 165	er
avis 57, 128, 130	er
axis 139	erv
barba 134	eti
benignus 244	fal
bos 98	fal
caecus 135	fai
caedo 135	fel
calamus 195	fili
canis 247	fu

rni-vorus 234 ttus 134 rebrum 198, 229 rtē 146 rvus 198 assis 228 gnatus 219f gnitus 204, 243 rnu 198 rvus 196 uor 202 lmus 195f, 206 beo 56 di 130 iespiter 149n ormio 191 96 i 111, 113, 130 (s. ago) o 273 ni 130 piscopus 20 ugio 88 ugo 36 vum 36 ro- Umbr. 47 ba 134 ber 134 r 134 lare 175 ius 175 lcio 192

funda 188 fur 247 genera 150 genetrix 155, 228 genitor 227f genitus 228 gens 228, 244 genu 168 germen 228 gero 89, 128, 134 glans 195 gnarus 166 gravis 191, 247, 249 grus 196 hemo 196 Hirpini 194 humilis 196 humus 196 ianitrices 195, 228 iecur 292 imber 74 im-pletus 219 induo 79 insece 27 intentus 26 iocur 292 Iovis 147n irritare 38 iubilare 51 Iuppiter 149 (s. lovis) kařetu Umbr. 235 lac 191

I. Italic

lacus 134 lana 195 latus 201, 212 lego 26 levi 40 (s. lino) liber 41f lino 40 (s. levi) Lucani 194 macer 183 malignus 244 malus 134 manipulus 244 marceo 239 migrare 43 mollis 42 mordeo 83 napurae 134 natio 220, 228 natus 219f nefas 105 neglego 26 nego 105 nemo 105 nep Osc. 104 nequam 105 nequaquam 105 neque 104 Nerio 12, 75 nertru Umbr. 45 nescio 105 neu 104 neuter 105 nidus 24, 27 nihil 105 nolo 105 nomen 47, 229f nomner Umbr. 230 non 105 nosco 166 notus 166, 211 nullus 105 numquam 105 nusquam 105 oboedio 58

odor 131 ops 51, 89 opulentus 51 orbus 131 ovis 130 pabulum 168, 173 palma 200, 228, 244 pars 228, 233, 244 pasco 168, 173, 272 pastor 168, 173 pateo 188, 209 pello 237 Piceni 194 picus 194 plango 200 planus 200 plebes 171, 174 plenus 219 po- 128 poculum 166, 175 portus 239 postis 247 potare 272 potus 175 prandium 214 Prestota Umbr. 147 privignus 244 pruter Osc. 215 puber 55 puer 55 qui 157 quia 157 rapio 36 rarus 36 rego 37, 236 remus 36, 132, 135, 234 rete 36 ripa 36 rivus 38 ruga 39 rugio 36 ruo 38 sabulum 189 salix 134 saxum 134

senex 83 sentina 83 sero 83 similis 196, 208 simplex 24 sisto, steti 123 solutus 171 spargo 197 sperno 50 spopondi 123 sterno 231 steti 123 stratus 211, 231, 245 stravi 212 struo 232 sturnus 51 sub 83 sufflamen 192 super 83 tarmes 229 tenebrae 198, 229 terebra 229 tollo 212 trabes 191

sedes 202

trííbúm Osc. 191 tuli 212 ukar Umbr. 128 ulula 125 umbilicus 44 umbo 44 unguis 47 unguo 91, 237 upupa 125 ursus 91, 133 vas 56 ventus 57, 93 vereor 79 viginti 62 vis 75 vivus 252 vorare 282 voveo 90

trabs 191

triginta 157

J. PHRYGIAN

ad(d)aket 20 anar 20 Γδαν 196

ocris 128

odium 140

dakar(en) 21 daket 20 daxet 20

scicidi 123

detoun 21 evet 21 keneman 20

J. Phrygian

kinouman 20n knouman 20, 108n matar 20 nadrotos 108n olayos 21 onoman 20f oouitetou 21 ουεγνω 244 ovevin 21 Temroge 108n ttetikmenos 123n vrekuntedatoz 21 ζεμελω 196

K. SLAVIC

Old Church Slavic not labeled

bogynji 155 bože Russ. 149 čena 167 dobrъ 134 dojo 175f drěmati 191 düg Serb. 237 ĕviti 58 дгъзtь 50 iga 157 ime 229 iz-mòliti Serb. 233 koróva Russ. 198 kräva Serb. 198 läbud Serb. 40 ležaka Russ. 26 lice 26 lokotь Russ. 22 molíti Slov, 233 nā 208n

ne- 105 nebo 74 oči 20, 158 огыъ 130 piti 175 plakati sę 200 plamy 231 po- 128 pojo 176 pro-noziti 53 přžiti Serb. 197 pün Serb. 203 rygatь Russ. 36 rykati 36 slabina Serb. 83f slabъ 84 släma Serb. 195, 206 slědъ 84f slimák Russ. 84 solóma Russ. 195, 206 soróka Russ. 196 svråka Serb. 196 tьnu Russ. 251 tri 157 ùtva Serb. 197 vějo 57 věno Russ. 58 vezošti 155 vùna Serb. 195 vъ- 27 želěti 53 želudь RussCS 195 zemlja Russ. 196 žena 147 zeno 225 **zьnjo** 225 zled Slov. 192 žlědica 192 znati 166

L. OTHER LANGUAGES

- Other IE languages

 a. Macedonian
 αβρουτες 21, 31

 b. Tocharian
 collaboration
 - sālyiye 134n wänt 57
 - c. Venetic

- lo.u.zeropo.s. 41
- 2. Non-IE languages
 - a. Sumerian temen 222n
 - b. Akkadian temennu 222n
 - c. Etruscan

pui(a) 55 d. Turkish iskelet 18n istasyon 18n istatistik 18n isterilize 18n

IV. GREEK

A. MYCENAEAN

(See also p. 258)

aikasama 128	euketo 133	mana 152 200-
aitijogo 194	euwakoro 67	paro 153, 208n
aiameno 122	ewakoro 67	pawea ₂ 67
akere 80		pekitira ₂ 155
	ewepesesomena 67	pema 223n
aketirija 155	ewisuzoko 66	pemo 223n
a ₃ kipata 129	ewisu*79ko 66	pokiroqo 194
akitito 108, 223n	**	poroteu 214n
ana 208n	ijate 12	poroto 214n
anemo 80	ijero 80, 184	potinija 155
ano 208n	jo- 98, 147	
apeasa 91	jodososi 147	qaratoro 194
apeo(te) 91		qasireu 194
apuke 194	karako 194	qeqinomeno 252
araromotemena 115, 117, 119	karatera 199	qeqinoto 252
araruja 115, 117, 122	kasikono 219	geto 194
araruwoa 122	kowo 202	-
arepate 80	kowo 239, 291	rapitira ₂ 155
aretere 234		reketoroterijo 259
aro ₂ a 234	meretirija 155	rewoterejo 232
aroura 231	mezoa ₂ 152, 254, 259	rewotorokowo 80, 232
a ₂ tero 223n	morogoro 194	500 to 500000000000000000000000000000000
atorogo 194	-	sukirita 194
	naputijo 111	
demeote 291	noperea ₂ 100-2, 106, 108, 111,	tanawa 191
duwoupi 147	214	tara ₂ to 259
•		tatomo 80
eesi 91	onato 259	temeno 222
enesidaone 231	o- 147	topeza 155
enewo(peza) 46, 80	-operosi 56, 225	topeza 133
eremo 259	opia ₂ ra 156n	wisawanana 66
ereta 80, 234	oromeno 116	wisowopaņa 66
ereutero 80	ote 98	70mm 70 250
eu- 67	ou 105n	zepu ₂ ro 259
eudewero 262	ouge 104	zesomeno 97
0440 W010 202	ouge 104	zeukeusi 97

GREEK

B. CLASSICAL GREEK

In the alphabetical arrangement the F is ignored. Inflectional forms are mostly given under the conventional captions, but they are often given separately.

The words beginning with α -, ϵ -, o- discussed on pp. 32-54 under the numbers I-V have not been included in the index.

(see αλ-, αμ-, αν-, αρ-) αρ-, words beginning with, 66-58 δάστος 91n αποτος 91n δάκλπέω 64 άποτος 91n δάκλπέω 64 άποτος 91n δάκλπέω 64 δάκροπες 194 δάβηρ 57 λεροπες 194 δάβλαβέως 83, 85 άβλημό 64 δέρλημό 64 δ	α-, words beginning with, 48-52	ἄελλα 57	αἰσθάνομαι 57 f, 69
αρ-, words beginning with, 56-58 α δαλπίε 64 α δαλπτέω 64 α δαλπάκως 83, 85 α δερο 571, 671, 89, 97 'Αέροπες 194 α δερο 30, 59, 64, 71, 2601 α δαρω 64 α δεσα 23, 30, 571, 69, 76, 89, 93, δαρω 64 α δεσα 23, 30, 571, 69, 76, 89, 93, δαρω 64 α δεσα 23, 30, 571, 69, 76, 89, 93, δαρω 64 α δεσα 23, 30, 571, 69, 76, 89, 93, δαρω 64 α δεσα 23, 30, 571, 69, 76, 89, 93, δαρω 67 (20) α δεσα 62, 20, 20 α δεσα 62, 20 α δεσα 62, 20, 20 α δεσα 62, 20, 20 α δεσα 62, 20, 20 α δεσα 62, 20 α δεσα 62, 20, 20 α δεσα 62,			
ἀαπτος 91n ἀελπτέο 64 αίχμητά 148 f ἀπτος 91n ἀεξο 57f, 67f, 89, 97 ἀρβο 57 ἀρροπες 194 αίδρα 50, 95 ἀκοδημος 195 ἀβλαράδως 83, 85 ἄερσα 30, 59, 64, 71, 260 f ἀκοδον 49 ἀκόμαντος 201 ἀκαμας 201 ἀκάμαντος 201 ἀκαμος 267 ακαμός 25, 28 ἀκομος 25, 28 ἀκομος 25, 28 ἀκαμος 267 ἀκαμος 260 ακαμός 202 ἀκόμαντος 201 ἀκαμος 260 ακαμος 260			
ἄαπτος 91n ἀξξω 57f, 67f, 89, 97 αἰῶρα 50, 95 ὰβλαδὲως 83, 85 ἄερσα 30, 59, 64, 71, 260 f ἀκάδημος 195 ἀβληρός 49, 52, 83, 85 ἄερα 30, 59, 64, 71, 260 f ἀκάμητος 184 ἀβληρός 49, 52, 83, 85 124, 127-9, 273 ἀκάμαντος 201 ἀβροτοί 72 ἄετμα 57 ἀκάματος 201 ἀγαθός 49 ἀετμο 57 ἀκαμος 201 ἀγάστορ 24 ἀπδών 57f, 69, 89 ἀκαυρός 25, 28 ἀγάστορ 24 ἀπδών 57f, 69, 89 ἀκαυρός 25, 28 ἀγέρουτο 224; ἀγηγέρατο 116, 118f, 120 ἀηδών 57f, 69, 89 χαιασίς (ομα; ἀκαχεῖν 139; ἀκά-			
ὰβλαδέως 83, 85 άβλαρός 49, 52, 83, 85 άβλαρός 49, 52, 83, 85 άβλαρός 49 άβλαρός 183 άρροτο 72 άτμον 57 άτμον 50 άτμον 57 άτμον 50 άτμον 57 άτμον 50 άτμον 57 άτμον 50 άτμον 50 άτμον 50 άτμον 50 άτμον 50 άτμον 57 άτμον 50 άτμον 50 άτμον 50 άτμον 50 άτμον 57 άτμον 50 άτμον 50 άτμον 50 άτμον 50 άτμον 57 άτμον 50 άτμον 50 άτμον 50 άτμον 57 άτμον 50 άτμον 57 άτμον 50 άτμον 50 άτμον 57 άτμον 50 άτμον 50 άτμον 50 άτμον 50 άτμον 57 άτμον 50 άτμον 57 άτμον 50 άτμον 50 άτμον 50 άτμον 57 άτμον 50 άτμον 57 άτμον 50 άτμον 57 άτμον 50 άτμον 57 άτμον 50 άτμον 50 άτμον 57 άτμον 50 άτμο			
άβλαρδεως 83, 85 ἄερσα 30, 59, 64, 71, 260 f ἀκαθον 49 ἀκαθον 49 άβληρός 49, 52, 83, 85 ἄερσα 23, 30, 57 f, 69, 76, 89, 93, ἀκάμαντος 201 ἀκάμαντος 201 άβρουτοί 72 ἄετμα 57 ἀκάμανος 201 ἀκάμανς 201 άγανός 49 ἀετμα 57 ἀκαμος 201 ἀκάμας 201 άγαντονς 192 ἄζετα 96 ἀκαρός 25, 28 ἀκαρός 25, 28 άγάστορο 24 ἀρδών 57 f, 69, 89 ἀγάστορο 24 ἀρδών 57 f, 69, 93, 238 117, 119 ἀκαρός 25, 28 άγέροντο 224; ἀγηγέρατο 116, 118 f, 120 ἀἡτα 255 ἀρδών 57 f, 69, 93, 238 117, 119 ἀκαρίς 115, 122 ἀκάμος 201 άγέλαστος 201 ἀθάνετος 207 ἀρέλβειν 50, 52 ἀκέραιος 197 ἀκμίς 201 άγκι 128 ἀθέλβειν 50, 52 ἀκρίς 115, 122 ἀκόρια 15 ἀκορτις 24, 54 άγος 128 άθελβειν 50, 52 ἀκρίς 128 ἀρος 13 ἀκοντις 24, 54 ἀκόρια 12 ἀκόρια 12 ἀκορνός 72, 194 ἀκορνός 116, 1129 ἀκορνός 10, 129 ἀκορνός 10, 129			
άβληρός 49, 52, 83, 85 άβληρος 49, 52, 83, 85 άβληρος 49, 52, 83, 85 άβρντοί 72 άρμος 73 άρμος 74 άρμος 74 άρμος 75 άρμ			
άβληχρός 49, 52, 83, 85			
άβρυτοί 72 άβρυτοί 72 άβρυτοί 72 άζα 25 άγάστονος 192 άγάστονος 192 άγέροντο 224; άγηγέρατο τ16, 118 f, 120 άγκε 128 άγκε 128 άγκε 135 άγνε 135 άγνε 128 άγνε 129 άγνε 129 άγνε 129 άγνε 129 άγνε 120 άγνε 129 άγνε 120 άγνε 129 άγνε 120 άγνε 120 άγνε 120 άγνε 120 άγνε 120 άγνε 120 άγνε 121 άγνε 122 άγνε 122 άγνε 135 άγνε 128 άγ			and the second s
άβρυτοί 72 ἀγαθός 49 ἀραθός 72 ἄξα 25 ἀγάστονος 192 ἀγάστονος 192 ἀγάστονος 24 ἀγάστονος 25, 28, 49 f, 52, 69; ἄημι 49 n, 57 f, 69, 93, 238 ἀγέροντο 24; ἀγηγέρατο 116, 118 f, 120 ἀγάντος 211 ἀγάντος 212 ἀγάντος 213 ἀγάντος 217 ἀγάντος 213 ἀγάντος 217 ἀγάντος 218 ἀγός 128 ἀγός 129 ἀγοτός 25, 50, 52, 69, 76 ἀγγινθος 13 ἀγος 129 ἀγγος 15, 122 ἀτος 57 ἀτος 15, 128 ἀτος 10, 129 ἀτος 17, 119 ἀγγος 135 ἀτος 57 ἀτος 15, 128 ἀτος 10, 129 ἀτος 17, 120 ἀτος 18, 135; ἀγον 170; ἀτος 57, 128, 130 ἀγαγτος 129, 134, 194 ἀγήγος 117, 119 ἀγαγτος 129, 124, 194 ἀδαγμός 72 αίθος 54 αίθος 54 αίθος 54 αίθος 54 αίθος 54 αδαγμός 54 αίθος 59 αεθλος 56, 58, 69, 93, 285 αίτα 158 f αίτην 159 αεθλος 59, 57, 68, 89; ῆειδε 168 αείρο 50, 57, 68, 83-5, 81 αίτης 158 f αεκητί 160			
άγαθός 49 ἀξω 25 ἄκωνθος 178n ἄκωνθος 178n άγαστονος 192 ἄξω 25 ἀκανθός 25, 28 ἀκανξίζομαι; ἀκαμεῖν 139; ἀκά- ἀγάστονος 24; ἀγηγέρατο 116, 118 f, 120 ἀγέροντο 224; ἀγηγέρατο 116, 118 f, 120 ἀγέροντο 224; ἀγηγέρατο 116, 118 f, 120 ἀγέροντο 224; ἀγηγέρατο 116, 118 f, 120 ἀη 115, 119, ἀκημέ(δ)αται 117, 119 άγείνοι 201 ἀράνατος 207 ἀρέλειν 50, 52 ἀκέραιος 197 ἀκέραιος 197 άγκών 135 ἀρέλξειν 50, 52, 69 ἄκοιτις 24, 54 ἀκόλουθος 38n άγος 128 άρει 71 ἀρει 60 ἀκον 140 ἀκον 140 άγος 128 άρει 71 ἀκος 110, 129 ἀκον 140 ἀκον 140 ἀκον 140 άγος 128 άρει 71 ἀβετός 57 ἀκον 140 ἀκον 140 ἀκον 140 ακον 140 ακον 140 ακον 110, 129 ακον 110, 129 ακον 110, 129 ακον 10, 129 ακον 10, 129 ακον 110, 129 ακον 10, 129			
άγανός 72 ἄζα 25 ἀκαρός 25, 28 ἀκαρός 25, 28 άγάστονος 192 ἄζα 25 ἀκαρός 25, 28 ἀκαχίζομαι; ἀκαχεῖν 139; ἀκά- χημαι 115, 119, ἀκηχέ(δ)αται 116, 118 f, 120 ἀρέροντο 224; ἀγηγέρατο 116, 118 f, 120 ἀήται 255 ἀπραντος 207 ἀκέραιος 115, 122 ἀκέραιος 197 άγκ- 128 ἀρέλδειν 50, 52 ἀρέλδειν 50, 52 ἀκόλουθος 38n ἀκόλουθος 38n άγνοι 156, 58 ἄρρς 71 ἀβελδειν 50, 52 ἀκούο 10, 129 ἀκού 13 άγος 129 αἴγιθος 13 αἴγιθος 13 ἀκού 10, 129 ἀκού 10, 129 άγρος 129 αἴγιθος 13 αἴγιθος 13 ἀκού 5, 22, 69, 76 ἀκού 5, 22, 69, 76 ἀκού 5, 22, 69, 76; ἀκήκοα άγρος 129 αἴγιθος 13 αἴει 105, 128 ἄκου 5, 52, 69, 76; ἀκήκοα άγρος 129 αἴγιθος 13 ἀκού 5, 52, 69, 76; ἀκήκοα άγρος 135 αἰεί 105, 128 ἄκρατος 199 ἄκορτος 109 άγρο 135 αἰεί 105, 128 ἄκρρτος 108 ἄκρρτος 108 άγχα 2, 50, 128, 135; ἄγον 170; αἰετός 57f, 128, 130 ἄκρρτος 108 ἄκρρτος 108 άγχος 125 αἰβθος 194 αἰθθος 194 αἰκοκή 125, 168 <th< td=""><td></td><td></td><td>The state of the s</td></th<>			The state of the s
άγάστονος 192 ἄξεται 96 ἀπάον 57 f, 69, 89 ἀπαχίζομαι; ἀπαχεῖν 139; ἀπά- άγάστονος 224; ἀγηγέρατο 116, 118 f, 120 ἀπὰ 255 ἀπὰ 1255 ἀπὰ 125 απὰ 125 ἀπὰ 125 απὰ 125 α			and the Table of the Control of the
άγάστωρ 24 ἀηδών 57f, 69, 89 χηματι 115, 119, ἀκηχέ(δ)αται άγειρω 25, 28, 49f, 52, 69; ἄημι 49n, 57f, 69, 93, 238 117, 119 άκαχμένος 115, 122 ἀκαχμένος 116, 117, 120 ἀκαχρένος 124, 54 ἀκαχρένος 125 αίβετός 57 ἀκαχρένος 129 αίγιθος 13 ἀκαχρένος 12, 144 ἀκαχρένος 12, 144 ἀκαχρένος 12, 144 ἀκαχρένος 12, 144 ἀκαχρένος 128, 135 αίε 105, 128 άκριος 195 ἀκαχρένος 128, 135, 139 ἀκαχρένος 128, 135, 139 ἀκαχρένος 128, 135, 139 ἀκαχρένος 125 αίθος 194 άκριος 198 αίθος 154 αίμωδέν 55 αίθαρατος 198 αίθος 154 αίμωδέν 55 αίναρέτα 150 αίθωσος 198 αίθος 154 αίμωδέν 55 αίναρέτα 150 αίδμαστος 198 αίδμασ			
ἀγέροντο 224; ἀγηγέρατο ἀημ 49n, 57f, 69, 93, 238 117, 119 ἀγέροντο 224; ἀγηγέρατο ἀηπα 255 ἀκαχμένος 115, 122 ἀγέλαστος 201 ἀβάντας 207 ἀκέομαι 25 ἀγκων 135 ἀβέλβειν 50, 52 ἀκόλουθος 38n ἄγνιμ 56, 58 ἄβρις 71 ἀκόλουθος 38n ἄγος 128 αἰβετός 57 ἀκονίν 140 ἀγος 129 αἴγιθος 13 ἀκονή 140 ἀγοτός 25, 50, 52, 69, 76 αἴγιθος 13 ἀκονή 110, 129 ἀγοτός 25, 50, 52, 72 αἰδοῖος 202 αἰδιοῖος 202 ἀγρεῖφνα 50, 72 αἰδιοῖος 202 αἰδιοῖος 202 ἀγχω 135 αἰες 57 αἰκριτος 108 ἄγχω 135 αἰες 57 αἰες κοντο 57 ἄγχω 135 αἰες 57 αἰες κοντο 59 ἄγχω 135 αἰες 57 αἰες κοντο 59 ἄγχω 135 αἰες 57 αἰες κοντο 59 ἄγχω 128, 135; ἄγου 170; αἰετός 57f, 128, 130 ακριτος 108 ἄγχως 128, 135; ἄγου 170; αἰετός 57f, 128, 130 ακτάρα 19 ἀγαγος 125 αἰθος 194 αἰετός 57f, 128, 130			
άγέροντο 224; ἀγηγέρατο ἀήρ 57 f 116, 118 f, 120 ἀγάλαστος 201 ἀγόκι 128 ἀβάνατος 207 ἀγκών 135 ἀβάνατος 30, 52, 69 ἀγόκι 44n ἀβέλδειν 50, 52 ἀγόκι 28 ἀγός 128 ἀγός 129 ἀγοτός 25, 50, 52, 69, 76 ἀγριφίν 50, 52 ἀγλίνος 13 ἀγριφίν 50, 52 ἀγριφίν 50, 52, 72 ἀδιδίος 202 ἀγριφίν 50, 72 ἀβάνονς 95 ἀκρις 13 ἀκον 50, 52, 69, 76; ἀκήκοα ἀγρεῖνα 50, 72 ἀβάνατος 207 ἀκρις 136 ἀγος 129 ἀγοτός 25, 50, 52, 69, 76 ἀγριφίν 50, 72 ἀβόνονς 95 ἀκρις 128 ἀκρις 128 ἀκρις 128 ἀκρις 135 ἀγίνι 122 ἀιδοτος 202 ἀβόνονς 95 ἀκρις 128, 134 ἀκρις 199 ἀκρις 128, 135 ἀγος 110, 129 ἀκον 50, 52, 69, 76; ἀκήκοα ἀγρεῖνα 135 ἀγος 135 ἀγος 135 ἀγος 148, 135; ἀγον 170; ἀμες 57 αἰετός 57 f, 128, 130 ἀκρις 128, 135, 139 ἀκρις 128, 135, 139 ἀκρις 128, 135, 139 ἀκρις 128, 136 ἀκρις 128 ἀκρις 128, 136 ἀκρις 128 ἀκονίν 140 ἀκονίν 10, 129 ἀκονίν 10, 120 ἀκονίν 10, 120 ἀκονίν 10, 129 ἀκονίν 10, 120 ἀκονίν 10, 120 ἀκονίν 10, 120 ἀκονίν 10,		ωηοων 5/1, 69, 89	
116, 118 f, 120 ἀ ἀῆται 255 ἀ ἀκέομαι 25 ἀ ἀκέομαι 25 ἀ ἀκέομαι 25 ἀ ἀκέρατος 201 ἀ βάνατος 207 ἀ κέρατος 197 ἀ ἀγκ. 128 ἀ βάνατος 207 ἀ κάριος 197 ἀ ἀκρίτις 24, 54 ἀ κόλουθος 38π ἄ γνυμι 56, 58 ἄ βρις 71 ἀ ἀκόνουθος 38π ἄ κόνη 140 ἀ κορνός 129 α ἴ 190ς 13 ἀ κού 129 ἀ γοστός 25, 50, 52, 69, 76 α ἴ 190ς 13 ἀ κού 50, 52, 69, 76 α ἴ 190ς 13 ἀ κού 50, 52, 69, 76 α ἴ 190ς 13 ἀ κού 50, 52, 69, 76 α ἴ 190ς 13 ἀ κού 50, 52, 69, 76 α ἴ 105, 128 ἀ κόν 122 ἀ κοίλουθος 95 α κίνι 122 ἀ κίνι 122 ἀ κίνι 122 ἀ κίνι 122 ἀ κίνι 122 ά κίνι 122 ά κίνι 122 ά κίνι 123 κίνι 123π, ἢ χαι 113, 119; λίθικες 194 ἀ κίνι 123π, ἢ χαι 113, 119; λίθικες 194 ἀ κίνι 125, 168 α λ-, words beginning with, 39-40 ἀ λάλατος 198 ἀ κίνι 54 α κίνι 49π ἀ λάλατος 115, άλαλημαι 115 ἀ λάλατος 198, 201 α κίνι 158 f α λλαπάδος 59 α κίνι 158 f α λλεγιος 158 α κίνι 158 f α λλεγιος 25 f, 31, 39 f, 68, 89 α α κίνι 158 f α λλεγιος 25 f, 31, 39 f, 68, 89 α α κίνι 158 f α λλεγιι 160			_
ἀγέλαστος 201 ἀθάνατος 207 ἀκέραιος 197 ἀγκον 135 ἀθέλβειν 50, 52 ἀκής 201 ἀγκον 135 ἀθέλβειν 50, 52, 69 ἀκοίντις 24, 54 ἀγλις 44n ἀθέλδειν 50, 52 ἀκόνοθος 38n ἄγος 128 αἰβετός 57 ἀκόνη 140 ἀγος 129 αἴγιθος 13 ἄκος 110, 129 ἀγοστός 25, 50, 52, 69, 76 αἴγιθος 13 ἀκού 50, 52, 69, 76; ἀκήκοα ἀγρεῖφνα 50, 52, 72 αἰδοῖος 202 116, 117, 120 ἀγραῖγος 135 αἰεί 105, 128 ἄκριτος 199 ἀγοτα 135 αἰεί 105, 128 ἄκριτος 108 ἄγαα 2, 50, 128, 135; ἄγον 170; αἰεσκοντο 57 ἄκριτος 128, 135, 139 ἄγαγεῖν 123n; ἤχα 113, 119; Αἴθισες 194 ἄκτιτος 223n ἀγαγοῖν 17, 119 Αἰθισες 194 ἄκοκή 125, 168 ἀβαγμός 72 αἴθος 194 ἀκοκή 125, 168 ἀβαγμός 72 αἴθος 194 ἀκοκή 125, 168 ἀβαγμός 72 αἴθος 19, 134, 194 ἀκοκή 125, 168 ἀβαγαστος 198 αἴθος 19, 134, 194 ἀκοκρίσσα 115 ἀλαλύκτημαι 115 ἀβδάς 54 αἰναρέτα 150 ἀλαίκ			
άγκ- 128 άγκόν 135 άγκόν 155 άγκόν 155 άγκόν 155 άγκόν 155 άγκόν 155 άγκόν 150, 52, 69 άκοντις 24, 54 άκοντις 24, 54 άκοντις 24, 54 άκοντις 24, 54 άκοννομος 38n άκοννομος 38n άκοννομος 128 άγρις 71 άκον 140 άκογος 128 άγρις 129 άγος 129 άγος 129 άγος 129 άγος 129 άγονοτός 25, 50, 52, 69, 76 άγριφ 50, 72 άγριφ 50, 72 άγριφ 135 άγριφ 135 άγρις 135 άγρις 128 άγρις 135 άγρις 128 άγρις 135 άγρις 128 άγρις 129 άκρις 128 άκρις 128, 134 άκρις 128 άκρις 128, 135; άγον 170; άγαγείν 123n; ήχα 113, 119; άγαγείν 123n; ήχα 113, 119; άγαγος 125 άβος 194 άβος 194 άβος 125 άβος 194 άβος 50, 129, 134, 194 άβαίμαστος 198 άβαίμαστος 198 άβαίμος 54 άβαίμος 54 άβαίμος 54 άβαίμος 54 άβαίμος 198, 201 άβαίμος 198, 201 άβος 56, 58, 69, 93, 285 άείδος 56, 58, 69, 93, 285 άείδος 56, 68, 89; ῆειδε 168 άειρος 50, 57f, 68, 83-5, 81 άκρις 160 αγρις 160 άκον 110 άκον 112, 119 άκον 111 άκον 111 άκον 111 άκον 112, 119 άκον 112 άκρις 128, 135, 139 άκρις 223n άκκοκ 1125, 168 άκρις 223n άκκοκ 1125, 168 άλαλύσθαι 115 άλαλύσθαι 115 άλαλύσθαι 115 άλαλύσθαι 115 άλαλύσθαι 115 άλαπαδος 81 άλαπαδος 81 άλαπαδος 81 άλαπαδος 81 άλαπαδος 95 άλαπαδος 95 άλαπαδος 39, 72, 80 f άλεγος 26, 39 f, 89 άλεγος 50, 57 f, 68, 83-5, 81 αμπός 158 f άκρις 35; ἀραίρηκα 117, 119 άλείη 62			and the second s
άγκων 135 άγκων 135 άγλις 44n άγελδειν 50, 52, 69 άκοιτις 24, 54 άκλουθος 38n άκόν 128 άγος 128 άγος 129 άγος 129 άγος 25, 50, 52, 69, 76 άγριξ 71 άγος 25, 50, 52, 69, 76 άγριξ 72 άγος 202 άγριξ 73 άκον 50, 52, 69, 76 άγριξ 74 άγριξ 75 άγριξ 72 άγριξ 75 άγριξ 75 άκος 110, 129 άκος 55, 52, 69, 76; ἀκήκοα άγριξ 72 άγριξ 72 άγριξ 72 άγριξ 135 άγι 122 άκριξ 75 άκριτος 199 άκριτος 199 άκριτος 199 άκριτος 199 άκριτος 198 άγριτος 128, 135; ἄγον 170; αἰετός 57f, 128, 130 άγριξ 125 άγριξ 125 άβαγμος 72 αίθος 50, 129, 134, 194 άβαμαστος 198 άβακριξ 74 άβακριξ 75 άβακριξ 75 άβακριξ 75 άβακριξ 75 άβακριξ 125 άβακριξ 75 άβακριξ 126 άβακριξ 75 άβακριξ 126 άβακριξ 127 άβακριξ 128 άβακριξ 128 άβακριξ 72 αίθος 50, 129, 134, 194 άβακριξ 72 αίμαδέω 55 άβακριξ 198, 201 άβελος 95 άβαμητος 198, 201 άβελος 95 άβμητος 198, 201 άβελος 56, 58, 69, 93, 285 αἰκος 158 f αἰκος 138 f αλεγως 26, 39 f, 89 α αλεγως 25 f, 31, 39 f, 68, 89 α αλεγως 25 f, 31, 39 f, 68, 89 α αλεγως 25 f, 31, 39 f, 68, 89 α αλεγως 25 f, 31, 39 f, 68, 89 α αλεγως 25 f, 31, 39 f, 68, 89 α αλεγως 25 f, 31, 39 f, 68, 89 α αλεγως 25 f, 31, 39 f, 68, 89 α αλεγως 25 f, 31, 39 f, 68, 89 α αλεγως 25 f, 31, 39 f, 68, 89 α αλεγως 25 f, 31, 39 f, 68, 89 α αλεγως 25 f, 31, 39 f, 68, 89 α αλεγως 25 f, 31, 39 f, 68, 89 α αλεγως 25 f, 31, 39 f, 68, 89 α αλεγως 25 f, 31, 39 f, 68, 89 α αλεγως 25 f, 31, 39 f, 68, 89 α αλεγως 25 f, 31, 39 f, 68, 89 α αλεγως 25 f, 31, 39 f, 68, 89			
ἄγλις 44n ἀ βέλδειν 50, 52 ἀ κόλουθος 38n ἄγνιμι 56, 58 α βρις 71 αίβετός 57 ἀκογι 129 αἴγυθος 13 ἀκος 110, 129 ἀκούω 50, 52, 69, 76; ἀκήκοα ἀγρεῖφνα 50, 52, 72 αἰδοῖος 202 116, 117, 120 ἀκρτός 25, 50, 52, 69, 76 αἴκιθος 202 αἰέλουρος 95 αἰεί 105, 128 ἀκριτος 108 ἀκριτος 108 ἀκριτος 128, 135, 139 ἀκτός 57 κριτος 108 ἀκριτος 128, 135, 139 ἀκτάρα 19 ἀκτάρα 19 ἀκοκή 125, 168 ἀγαγεῖ 123n; ἤχα 113, 119; Αἰθισες 194 ἀκοκή 125, 168 ἀγαγός 125 αἰθος 57 κριτος 194 ἀκοκή 125, 168 ἀγαγός 72 αἴθος 57 κριτος 198 ἀδάκα 54 αἰναρέτα 150 ἀλαλύκτημαι 115 ἀλαλύκτημαι 115 ἀλελφ(ε)ός 24 αἴνα 49n αἴκιτος 198, 201 αἴεδος 55 κριτος 198 ἀιδος 95 αἰναί 158 Γ αλεκρός 56, 58, 69, 93, 285 αἰπά 158 Γ αἰρός 158 Γ αἰρός 56, 68, 89; ἤειδε 168 αἰπήν 159 ἀκερος 56, 57, 68, 83-5, 81 ἀκρίς 156 αἰρέω 35; ἀραίρηκα 117, 119 ἀλεή 62			
ἄγνυμι 56, 58 ἀγός 128 ἀγός 129 ἀγός 129 ἀγός 129 ἀγός 13 ἀκογός 12, 194 ἀκος 110, 129 ἀκογοτός 25, 50, 52, 69, 76 ἀγρετφνα 50, 52, 72 αἰδοῖος 202 ἀιδοῦος 202 ἀιδοῦος 202 ἀιδοῦος 203 ἀκριτος 199 ἀκριτος 199 ἀκριτος 199 ἀκριτος 108 ἄκριτος 108 ἄκριτος 108 ἄκριτος 108 ἄκριτος 108 ἄκριτος 108 ἄκριτος 128, 135, 139 ἀκοτός 128, 135, 139 ἀκονός 77, 128, 130 ἀκριτος 128, 135, 139 ἀκτίτος 223n ἀκτίτος 223n ἀκοτή 125, 168 ἀγαγός 125 ἀδαματος 198 αἴθος 50, 129, 134, 194 ἀδαματος 198 αἴθος 54 αἴθος 55 αἴδακον 54 αἴθος 57 αἴθος 57 αἴθος 57 αἴθος 57 αἴθος 194 αἴκιτος 223n ἀκοκή 125, 168 αἰκοκή 125, 168 αἰκοκή 125, 168 αἰκοκον 55 αἴθος 54 αἴθος 50, 129, 134, 194 αλαλύκτημαι 115 αλαλύσθαι 115			
ἀγός 128 αἰβετός 57 ἀκορνός 72, 194 ἄγος 129 αἴγιθος 13 ἄκος 110, 129 ἀγοστός 25, 50, 52, 69, 76 αἴγινθος 13 ἀκούω 50, 52, 69, 76; ἀκήκοα ἀγρεῆνα 50, 52, 72 αἰδοῖος 202 116, 117, 120 ἀγρεῆν 50, 72 αἰδοκονρος 95 ἄκρετος 199 ἀγρος 135 αἰε 6κοντο 57 ἄκρετος 108 ἄγαν 122 ἀιες 57 ἄκρτος 128, 134 ἄγαν 2, 50, 128, 135; ἄγον 170; αἰετός 57 f, 128, 130 ἀκτάρα 19 ἀγαγεῖν 123n; ἡχα 113, 119; Αἰθιοπες 194 ἄκπιτος 223n ἀγηγοςα 117, 119 Αἰθιοπες 194 ἀκοκή 125, 168 ἀδαγμός 72 αἴθο 75, 194 ἀκοκή 125, 168 ἀδαγμός 72 αἴθον 75, 194 ἀλαλύκτημαι 115 ἀδαζω 54 αἴμωδέω 55 αἰγω 49n ἀλαλύσθαι 115; ἀλάλημαι 115 ἀδελφ(ε)ός 24 αἴνω 49n ἀλαπαδνός 81 ἀλαπαδνός 81 ἄμητος 198, 201 αἰδλος 95 ἀλαπάζω 39, 72, 80 f ἄεθνος 59 αἰσλος 95 ἀλαπαδνός 81 ἀλαπαδνός 81 ἀεληνος 26, 39 f, 89 ἀλείω 39 ἀλείω 39 ἀλείνος 25 g <			ἀκόλουθος 38n
ἄγος 129 αἴγιθος 13 αἴκος 110, 129 ἀκούπ 50, 52, 69, 76 αἴγινθος 13 ἀκούπ 50, 52, 69, 76; ἀκήκοα ἀγρεῖφνα 50, 52, 72 αἰδοῖος 202 116, 117, 120 ἀκριτος 199 ἀκριτος 199 ἀκριτος 199 ἀκριτος 199 ἀκριτος 108 ἄκριτος 108 ἀκριτος 108 ἀκριτος 108 ἀκριτος 128, 135, 139 ἀκτίρος 223n ἀκτίρος 125 αἰθος 194 ἀκοκή 125, 168 αλ-, words beginning with, 39-40 ἀλαλύκτημαι 115 ἀδάμαστος 198 αἴθος 50, 129, 134, 194 ἀλαλύκτημαι 115 ἀλαλύσθαι 115 ἀλαλύσθαι 115 ἀλαλύσθαι 115 ἀλαλύσθαι 115 ἀλακίρος 56 ἀναρέτα 150 ἀλανίρος 56 ἀλάομαι 115; ἀλάλημαι 115 ἀλαμίρος 198, 201 αἴξ 128 ἀλαπάδος 81 ἀλαπάδος 81 ἀλαπάδος 59 αἰονάω 95 ἄλρος 56, 58, 69, 93, 285 αἰπά 158 f ἀλείδος 56, 58, 69, 93, 285 αἰπά 158 f ἀλείδος 56, 57 f, 68, 83-5, 81 αἰπός 158 f ἀλείδος 55, 57 f, 68, 83-5, 81 αἰπός 158 f ἀλείδος 25 f, 31, 39 f, 68, 89 ἀλείρος 50, 57 f, 68, 83-5, 81 αἰπός 158 f ἀλείδος 25 γλείδος 25 γλείδος 25 γλείδος 35 γλείδος 35 γλείδος 25 γλείδος 35 γλείδος 35 γλείδος 25 γλείδος 35 γλείδο			ἀκόνη 140
ἀγοστός 25, 50, 52, 69, 76 ἀγρεῖφνα 50, 52, 72 αἰδοῖος 202 αἰξουρος 95 ἀγρος 135 αἰεί 105, 128 ἄγρια 135 αἰεί 105, 128 ἄκριτος 108 ἄκριτος 128, 135, 139 ἀκτίτος 223n ἀκιτός 223n ἀκοκή 125, 168 αλ-, words beginning with, 39-40 ἀλαλύκτημαι 115 ἀδάμαστος 198 αἴθος 194 αἴθος 194 αλλύσθαι 115 ἀδάμαστος 198 αἴθος 50, 129, 134, 194 αλλύσθαι 115 ἀλαλύσθαι 115 ἀδαμάσ 54 αἴνο 49n αἴξι 128 αλαπαδνός 81 αλαπαδνός 81 αδμητος 198, 201 αιξί 128 αλαπαδνός 81 αλαπαδνός 81 αλαπαδνός 85 αλάμος 59 αἰονάω 95 ακθλος 56, 58, 69, 93, 285 αἰπά 158 f ακεριτί 160 αἰρέω 35; ἀραίρηκα 117, 119 αλέη 62			ἀκορνός 72, 194
ἀγρεῖφνα 50, 52, 72 αἰδοῖος 202 116, 117, 120 ἀκρατος 199 ἀκριος 135 αἰεί 105, 128 ἄκριτος 199 ἄκριτος 108 ἄκριτος 128, 135, 139 ἀκτάρα 19 ἀκτάρα 19 ἄκτιτος 223n ἀγήγοχα 117, 119 Αἰθικες 194 ἄκπιτος 223n ἀκωκή 125, 168 ἀγωγός 125 αἰθός 194 αἰθοψ 75, 194 αἰθοψ 75, 194 ἀλαλύκτημαι 115 ἀδάμαστος 198 αἴθω 50, 129, 134, 194 ἀλαλύκτημαι 115 ἀδάλω 54 αἰνωδέω 55 αἰνωδέω 55 αἰνωρέτα 150 αἰκρός 95 αἰνωρέτα 150 ἀλαπαδνός 81 άλαπαδνός 81 ἀδμητος 198, 201 αἰξίς 128 αἰδος 95 αἰονάω 95 αἰροψ 95, 128 αἰλός 95 αἰονάω 95 αἰροψ 56, 58, 69, 93, 285 αἰπά 158 τα αλκόμος 158 αἰκός 158 τα αλκόμος 39, 72, 80 τα αλκόμος 56, 56, 86, 89; ἤειδε 168 αἰπήν 159 ἀλεγωνός 39 αλκόμος 25 τα αλκόμος 158 τα αλκόμος 25 τα αλκόμος 25 τα αλκόμος 39 αλκόμος 158 τα αλκόμος 158 τα αλκόμος 25 τα αλ		and the same of th	
ἀγριφή 50, 72 αἰέλουρος 95 αἰεί 105, 128 ἄκριτος 199 ἄκριτος 108 ἄκριτος 128, 135, 139 ἀκτάρα 19 ἀκτάρα 19 ἀκτάρα 19 ἀκτάρα 19 ἀκτίτος 223n ἀκτήγοχα 117, 119 Αἰθιοπες 194 ἀλοκή 125, 168 ἀγαγός 125 αἰθός 194 ἀλοκή 125, 168 ἀλοκή 125, 168 ἀλοκή 125, 168 αἰθος 50, 129, 134, 194 ἀλαλόκτημαι 115 ἀδάμαστος 198 αἴθω 50, 129, 134, 194 ἀλαλόκτημαι 115 ἀδάκω 54 αἴνω 49n ἀκμός 198, 201 αἴδρις 198, 201 αἴδρις 198, 201 αἴδρις 198, 201 αἴδρις 59 αἰονάω 95 αἰονάω 95 αἰονάω 95 αἰονάω 95 αἰονάω 95 αἰνονός 56, 58, 69, 93, 285 αἰπά 158 f ἀκείω 56-8, 68, 89; ἤειδε 168 αἰπήν 159 ἀκείρις 56, 57 f, 68, 83-5, 81 αἰρέω 35; ἀραίρηκα 117, 119 ἀλέη 62		αἴγινθος 13	ἀκούω 50, 52, 69, 76; ἀκήκοα
ἀγρός 135 αἰεί 105, 128 ἄκρις 128 , 134 ἄκριτος 108 ἄκρια 122 ἄιες 57 αἰεί τος 57 άκριτος 108 ἄκριτος 108 ἄκρος 128 , 135, 139 ἀκραγεῖν 123η; ἦχα 113, 119; Αἰθικες 194 ἄκτιτος 223η ἀγήγοχα 117, 119 Αἰθικες 194 ἀκωκή 125, 168 ἀγωγός 125 αἰθός 194 αἰθος 75, 194 ἀλαλύκτημαι 115 ἀδάμαστος 198 αἴθω 50 , 129, 134, 194 ἀλαλύκτημαι 115 ἀδελφ(ε)ός 24 αἴνω 49η αἰκρός 55 αἰναρέτα 150 ἀλαματι 115; ἀλάλημαι 115 ἀδελφ(ε)ός 24 αἴνω 49η αἰξι 128 αλαπάζω 39, 72, 80 f ἀλητος 198, 201 αἰδλος 95 αἰονάω 95 αἰθος 59, 57 f, 68, 89; ἤειδε 168 αἰπήν 159 ἀλεγω 25 f, 31, 39 f, 68, 89 ἀερω 50, 57 f, 68, 83-5, 81 αἰρώς 35; ἀραίρηκα 117, 119 ἀλέη 62			116, 117, 120
ἄγοια 122 ἄιες 57 ἄκριτος 108 ἄκριτος 108 ἄκρω 135 αἰέσκοντο 57 αἰέσκοντο 57 αἰέσκοντο 57 αἰεσός 57 f, 128, 130 ἀκτάρα 19 ἀκτίσς 223n ἀκρήγοχα 117, 119 Αἰθισπες 194 ἀκπίτος 223n ἀκακή 125, 168 αἰθος 194 αἰθος 72 αἰθος 75, 194 ἀλαλόκτημαι 115 ἀδάμαστος 198 αἴθω 50, 129, 134, 194 ἀλαλόκτημαι 115 ἀδάκω 54 αἰνωθέω 55 αἰνωθέω 55 ἀίγολανίας 36 αἰνωθέα 56 αἰνωθέα 115 αλαπαδνός 8ὶ ἀλαπαδνός 8ὶ ἀλαπαδνός 8ὶ ἀλαπαδνός 8ὶ αἰκωρίς 198, 201 αἰξία 128 αἰκωρίς 198, 201 αἰδλος 95 αἰνωθέα 95 αἰνωθέα 95 αἰνώμαν 40, -ιστος 40 ἀεδνος 59 αἰνάω 95 αἰνώμαν 95 αλγίων 40, -ιστος 40 ακθέα 39 αἰκά 158 f αλείω 56-8, 68, 89; ἤειδε 168 αἰπήν 159 αλεγεινός 39 αἰκός 158 f αἰρέω 35; ἀραίρηκα 117, 119 αλέη 62		αιέλουρος 95	ἄκρατος 199
ἄγχω 135 αἰέσκοντο 57 αἰεσκοντο 57 αἰκρος 128, 135, 139 αἰτός 57 f, 128, 130 ἀκτάρα 19 ἀκτίτος 223n ἀκρήγοχα 117, 119 Αἰθιόπες 194 αἰκοκή 125, 168 αλ-, words beginning with, 39-40 ἀδαγμός 72 αἰθοψ 75, 194 ἀλαλύκτημαι 115 ἀδάμαστος 198 αἴθος 55 αἰναρέτα 150 ἀλαλύσθαι 115; ἀλάλημαι 115 ἀδελφ(ε)ός 24 αἴνω 49n ἀλαλύκτης 198, 201 αἴξ 128 αἴνω 49n ἀλαπάχω 39, 72, 80 f αἴθμητος 198, 201 αἰδλος 95 αἰναρέτα 150 ἀλαπάχω 39, 72, 80 f ακρίτος 59 αἰναίω 95 αἰναίω			ἄκρις 128 , 134
ἄγω 2, 50, 128, 135; ἄγον 170; αἰετός 57f, 128, 130 ἀκτάρα 19 ἄκτιτος 223n ἀγήγοχα 117, 119 Αἰθισπες 194 ἀκωκή 125, 168 αλ-, words beginning with, 39-40 ἀδαγμός 72 αίθοψ 75, 194 ἀλαλύκτημαι 115 ἀδαμαστος 198 αἴθω 50, 129, 134, 194 ἀλαλύκτημαι 115 ἀδαλώς 54 αἰνωδέω 55 αἰνωρέτα 150 ἀλαλύκτημαι 115 ἀδαμαστος 198, 201 αἴξ 128 ἀλαπάζω 39, 72, 80 f ἄδμητος 198, 201 αἴδλος 95 αἰνάρος 59 αἰονάω 95 αἰνάω 95 αἰκάι 158 f αλεφενός 39 αἰκός 158 f αἰρως 158 f αἰρως 35; ἀραίρηκα 117, 119 ἀλέη 62	· · · · · · · · · · · · · · · · · · ·		ἄκριτος 108
ἀγαγεῖν 123n; ἦχα 113, 119; Αἴθικες 194 ἀκτιτος 223n ἀγήγοχα 117, 119 Αἰθίοπες 194 ἀκωκή 125, 168 ἀχωγός 125 αἰθός 194 αἰθός 194 ἀλαλύκτημαι 115 ἀδάμαστος 198 αἴθω 50, 129, 134, 194 ἀλαλύσθαι 115 ἀδάξω 54 αἰνωδέω 55 ἀ(ρ)λανέως 56 ἀδαραίος 24 αἴνω 49n ἀλαπάδος 81 ἀλαπάδος 81 ἀδμητος 198, 201 αἴξ 128 ἀλαπάδος 95 ἀλαπάδος 59 αἰονάω 95 ἀλγίων 40, -ιστος 40 ἀεθνος 59 αἰνάω 95 ἀλάφος 56, 58, 69, 93, 285 αἰπά 158 αἰπήν 159 ἀλεγεινός 39 ἀλεγεινός 39 ἀλεγεινός 39 ἀλεγεινός 39 ἀλεγων 25 f, 31, 39 f, 68, 89 ἀλεπητί 160 αἰρεω 35; ἀραίρηκα 117, 119 ἀλεή 62	The state of the s		
ἀγήγοχα 117, 119 Αἰθίοπες 194 ἀκωκή 125, 168 ἀγωγός 125 αἰθός 194 αλ-, words beginning with, 39-40 ἀδαγμός 72 αἴθω 75, 194 ἀλαλύκτημαι 115 ἀδάμαστος 198 αἴθω 50, 129, 134, 194 ἀλαλύσθαι 115 ἀδαχάω 54 αἰμωδέω 55 ἀ(ϝ)λανέως 56 ἀδαχάω 54 αἰναρέτα 150 ἀλαπαδνός 81 ἀδμής 198, 201 αἴξ 128 ἀλαπαδνός 81 ἄδμητος 198, 201 αἰδλος 95 ἀλαπάζω 39, 72, 80 f ἄδμητος 198, 201 αἰόλος 95 ἀλγίων 40, -ιστος 40 ἄεδνος 59 αἰονάω 95 ἄλγος 26, 39 f, 89 ἄεθλος 56, 58, 69, 93, 285 αἰπά 158 f ἀλέα 39 ἀείδω 56-8, 68, 89; ἤειδε 168 αἰπήν 159 ἀλεγεινός 39 ἀείρω 50, 57 f, 68, 83-5, 81 αἰρέω 35; ἀραίρηκα 117, 119 ὰλέη 62		αίετός 57 f, 128 , 130	ἀκτάρα 19
ἀγωγός 125 αἰθός 194 αλ-, words beginning with, 39-40 ἀδαγμός 72 αἴθω 50, 129, 134, 194 ἀλαλύκτημαι 115 ἀδάξω 54 αἰμωδέω 55 ἀ(ρ)λανέως 56 ἀδαλφ(ε)ός 24 αἴνω 49n ἀλαπαδνός 81 ἀδμητος 198, 201 αἴξ 128 ἀλαπάζω 39, 72, 80 f ἄδμητος 198, 201 αἰόλος 95 ἀλγίων 40, -ιστος 40 ἄεδνος 59 αἰονάω 95 ἄλγος 26, 39 f, 89 ἄεθλος 56, 58, 69, 93, 285 αἰπά 158 f ἀλέα 39 ἀείδω 56-8, 68, 89; ἤειδε 168 αἰπήν 159 ἀλεγω 25 f, 31, 39 f, 68, 89 ἀείρω 50, 57 f, 68, 83-5, 81 αἰρέω 35; ἀραίρηκα 117, 119 ἀλέη 62	ἀγαγεῖν 123n; ἦχα 113, 119;	Αἴθικες 194	ἄκτιτος 223n
ἀδαγμός 72 αἴθοψ 75, 194 ἀλαλύκτημαι 115 ἀδάμαστος 198 αἴθω 50, 129, 134, 194 ἀλαλύσθαι 115 ἀδάξω 54 αἰμωδέω 55 ἀ(ρ)λανέως 56 ἀδαλφ(ε) ός 24 αἴνω 49n ἀλαπαδνός 81 ἀδμης 198, 201 αἴξ 128 ἀλαπάζω 39, 72, 80 f ἄδμητος 198, 201 αἰόλος 95 ἀλγίων 40, -ιστος 40 ἄεδνος 59 αἰονάω 95 ἄλγος 26, 39 f, 89 ἄεθλος 56, 58, 69, 93, 285 αἰπά 158 f ἀλέα 39 ἀείδω 56-8, 68, 89; ἤειδε 168 αἰπήν 159 ἀλεγεινός 39 ἀείρω 50, 57 f, 68, 83-5, 81 αἰπός 158 f ἀλέγω 25 f, 31, 39 f, 68, 89 ἀεκητί 160 αἴρέω 35; ἀραίρηκα 117, 119 ἀλέη 62	άγήγοχα 117, 119	Αἰθίοπες 194	ἀκωκή 125, 168
ἀδαγμός 72 αἴθοψ 75, 194 ἀλαλύκτημαι 115 ἀδάμαστος 198 αἴθω 50, 129, 134, 194 ἀλαλύσθαι 115 ἀδάζω 54 αίμωδέω 55 ἀ(ϝ)λανέως 56 ἀδαχάω 54 αἴναρέτα 150 ἀλάομαι 115; ἀλάλημαι 115 ἀδελφ(ε)ός 24 αἴνω 49n ἀλαπαδνός 81 ἀδμής 198, 201 αἴξ 128 ἀλαπάζω 39, 72, 80 f ἄδμητος 198, 201 αἰόλος 95 ἀλγίων 40, -ιστος 40 ἄεδνος 59 αἰονάω 95 άλγος 26, 39 f, 89 ἄεθλος 56, 58, 69, 93, 285 αἰπά 158 f ἀλέα 39 ἀείδω 56-8, 68, 89; ἤειδε 168 αἰπήν 159 ἀλεγεινός 39 ἀείρω 50, 57 f, 68, 83-5, 81 αἰπός 158 f ἀλέγω 25 f, 31, 39 f, 68, 89 ἀεκητί 160 αἴρος 35; ἀραίρηκα 117, 119 ἀλέη 62	άγωγός 125	αίθός 194	αλ-, words beginning with, 39-40
άδάμαστος 198 αἴθω 50, 129, 134, 194 αἴμωδέω 55 αἰτωδέω 56 αἰτωδέω 55 αἰτωδέω 56 αἰτωδέω 56 αἰτω 49n αῖξ 128 αἰτωτος 198, 201 αῖξ 128 αἰτωτος 198, 201 αἰδλος 95 αἰτωτος 198, 201 αἰδλος 95 αἰτωτος 56, 58, 69, 93, 285 αἰτωτος 56, 58, 69, 93, 285 αἰτωτος 56, 58, 69, 93, 285 αἰτωτος 56, 56, 68, 89; ἤειδε 168 αἰτωτος 158 f αὶτωτος 158 f αἰτωτος 158 f αὶτωτος 158 f	άδαγμός 72	αίθοψ 75, 194	
ἀδάξω 54 αίμωδέω 55 ἀ(F)λανέως 56 ἀδαχάω 54 αἰναρέτα 150 ἀλάομαι 115; ἀλάλημαι 115 ἀδελφ(ε)ός 24 αἴνω 49n ἀλαπαδνός 81 ἀδμής 198, 201 αἴξ 128 ἀλαπάζω 39, 72, 80 f ἄδμητος 198, 201 αἰόλος 95 ἀλγίων 40, -ιστος 40 ἄεδνος 59 αἰονάω 95 ἄλγος 26, 39 f, 89 ἄεθλος 56, 58, 69, 93, 285 αἰπά 158 f ἀλέα 39 ἀείδω 56-8, 68, 89; ἤειδε 168 αἰπήν 159 ἀλεγεινός 39 ἀείρω 50, 57 f, 68, 83-5, 81 αἰπός 158 f ἀλέγω 25 f, 31, 39 f, 68, 89 ἀεκητί 160 αἰρέω 35; ἀραίρηκα 117, 119 ἀλέη 62	άδάμαστος 198	αἴθω 50 , 129, 134, 194	
ἀδαχάω 54 αἰναρέτα 150 ἀλάομαι 115; ἀλάλημαι 115 ἀδελφ(ε)ός 24 αἵνω 49n ἀλαπαδνός 81 ἀδμής 198, 201 αἵξ 128 ἀλαπάζω 39, 72, 80 f ἄδμητος 198, 201 αἰόλος 95 ἀλγίων 40, -ιστος 40 ἄεδνος 59 αἰονάω 95 ἄλγος 26, 39 f, 89 ἄεθλος 56, 58, 69, 93, 285 αἰπά 158 f ἀλέα 39 ἀείδω 56-8, 68, 89; ἤειδε 168 αἰπήν 159 ἀλεγεινός 39 ἀείρω 50, 57 f, 68, 83-5, 81 αἰπός 158 f ἀλέγω 25 f, 31, 39 f, 68, 89 ἀεκητί 160 αἰρέω 35; ἀραίρηκα 117, 119 ἀλέη 62	ἀδάξω 54	αίμωδέω 55	
ἀδελφ(ε)ός 24 αἵνω 49n ἀλαπαδνός 81 ἀδμής 198, 201 αἵξ 128 ἀλαπάζω 39, 72, 80 f ἄδμητος 198, 201 αἰόλος 95 ἀλγίων 40, -ιστος 40 ἄεδνος 59 αἰονάω 95 ἄλγος 26, 39 f, 89 ἄεθλος 56, 58, 69, 93, 285 αἰπά 158 f ἀλέα 39 ἀείδω 56-8, 68, 89; ἤειδε 168 αἰπήν 159 ἀλεγεινός 39 ἀείρω 50, 57 f, 68, 83-5, 81 αἰπός 158 f ἀλέγω 25 f, 31, 39 f, 68, 89 ἀεκητί 160 αἰρέω 35; ἀραίρηκα 117, 119 ἀλέη 62	άδαχάω 54	αὶναρέτα 150	
ἀδμής 198, 201 αἴξ 128 ἀλαπάζω 39, 72, 80 f ἄδμητος 198, 201 αἰόλος 95 ἀλγίων 40, -ιστος 40 ἄεδνος 59 αἰονάω 95 ἄλγος 26, 39 f, 89 ἄεθλος 56, 58, 69, 93, 285 αἰπά 158 f ἀλέα 39 ἀείδω 56-8, 68, 89; ἤειδε 168 αἰπήν 159 ἀλεγεινός 39 ἀείρω 50, 57 f, 68, 83-5, 81 αἰπός 158 f ἀλέγω 25 f, 31, 39 f, 68, 89 ἀεκητί 160 αἰρέω 35; ἀραίρηκα 117, 119 ἀλέη 62	ἀδελφ(ε)ός 24	αΐνω 49n	
ἄδμητος 198, 201 αἰόλος 95 ἀλγίων 40, -ιστος 40 ἄεδνος 59 αἰονάω 95 ἄλγος 26, 39 f, 89 ἄεθλος 56, 58, 69, 93, 285 αἰπά 158 f ἀλέα 39 ἀλεγεινός 39 ἀλεγεινός 39 ἀλεγω 25 f, 31, 39 f, 68, 89 ἀξεητί 160 αἰρέω 35; ἀραίρηκα 117, 119 ἀλέη 62	ἀδμής 198, 201	αῖξ 128	
ἄεδνος 59 αἰονάω 95 ἄλγος 26, 39 f, 89 αἰκθλος 56, 58, 69, 93, 285 αἰπά 158 f αλέα 39 αἰκήν 159 αλεγεινός 39 αἰκός 158 f αἰρω 50, 57 f, 68, 83-5, 81 αἰρω 35; ἀραίρηκα 117, 119 αλέη 62	ἄδμητος 198, 201	αιόλος 95	
ἄεθλος 56, 58, 69, 93, 285 αἰπά 158 f αλέα 39 αἰείδω 56-8, 68, 89; ἤειδε 168 αἰπήν 159 αλεγεινός 39 αἰείρω 50, 57 f, 68, 83-5, 81 αἰπός 158 f αἰρέω 35; ἀραίρηκα 117, 119 αλέη 62	ἄεδνος 59	αἰονάω 95	
ἀείδω 56-8, 68, 89; ἤειδε 168 αἰπήν 159 ἀλεγεινός 39 ἀλείρω 50, 57 f, 68, 83-5, 81 αἰπός 158 f ἀλέγω 25 f, 31, 39 f, 68, 89 ἀλείητί 160 αἰρέω 35; ἀραίρηκα 117, 119 ἀλέη 62	ἄεθλος 56, 58, 69, 93, 285	αὶπά 158 f	
ἀείρω 50, 57 f, 68, 83-5, 81 αἰπός 158 f αἰκός 158 f αἰρών 25 f, 31, 39 f, 68, 89 αἰρών 35; ἀραίρηκα 117, 119 ἀλέη 62	ἀείδω 56-8, 68, 89; ἤειδε 168		· ·
ἀεκητί 160 αἰρέω 35; ἀραίρηκα 117, 119 ἀλέη 62	ἀείρω 50, 57 f, 68, 83-5, 81		and the second s
1/4	ἀεκητί 160	-	
	ἀέλιοι 57 f, 69, 71, 85	αΐσα 128, 155	ἀλείατα 234

άλείτης 40, 68, 85 άμείβω 43, 68 ἀνήνεμος 102 ἀλείφω 20, 40, 68, 72, 80, 83 f, ἀμέλγω 20, 25, 43, 68, 70, 76 ἀνήνιος 111 259; ἀλήλιφα 116, 118, 120, ἀμέλδω 42, 68, 73, 85 f, 109 ἀνήνοθε 116, 118 -μμαι 116, 118 ἀμέργω 43, 68, 71, 83 f. 239 άνήνυστος 111 άλεκτρυών 259 ἀμέρδω 43, 68, 73, 83 f, 254 άνήνωρ 111 άλέκτωρ 12 άμη 83 ανήρ 20, 22, 45 f, 68, 70, 72, 75 f. ἀλέξω 39 f, 67 f, 89, 124, 259; ἀμῖξαι 43, 71 87, 93 f, 254, 259; ἀνδρός 132 αλαλκεῖν 56, 123n άμιχθαλόεσσα 44, 71 άνηρείψαντο 35 άλέ(F)ομαι 39 f, 68; άλεύεται 38 άμμά 147 ἀνήρεστον 111 άλετρεύω 234 άμμος 189 άνηρεφής 111 άλετρίς 234 άμο- 208 ἀνήροτος 111 άλευρον 231, 234 άμογητί 160 άνθος 74, 118 άλέω 40; -έσαι 129, 135, 234; άμοιος 83 άνθρήνη 72 άλήλεκα 116, -ε(σ)μαι 116f, άμολγός 43, 68, 76 άνθρωπος 45, 72, 74, 194, 290 119f άμοργή 239 άνιδρωτί 160 άληνής 72 άμοργός 83 ἀνίη 111 άλής (ά-) 56, 58 ἄμοτον 26 άννίς 45 άλία 25 ἄμπυξ 194 άνουτητί 160 άλίγκιος 26 άμυγδάλη 71 άντα 45 άλίνειν 40, 68, 83 f Αμυκος 31 άνται 254 f άλις 56 άμφασίη 107 ἀντί 127, 135, 153 άλιταίνω 40, 109 αμφί 74 άντυξ 194 ἀλκή 39 f, 89, 135 ἄμφω 147 ανυμι 235 f. 255, 279 άλκη 40 αν 255 ἄνω 153, 208n άλκτήρ 12 av-, words beginning with, 44-5 ἀνώδυνος 102 άλλοθρόος 233 άνωιστί 160 άλοίτης 76 ἄνα 33, 71, 135, 149, 152, 154, ἀνώιστος 58, 111 άλοιτός 40 208n, 223, 255 f, 260 ἀνώλεθρος 111 άλοιφή 76 ἀνάβλησις 219 ἀνωλόφυκτος 111 άλοξ 40, 65, 193, 195, 276 f ἀνάγνωστος 104 ἀνώμαλος 111 άλοχος 24 ἀνάεδνος 59, 103 άνωμοτί 111 άλς 134 ἀνάελπτος 103 ἀνώνυμος 102 f, 110, 214 άλύσκω 39 άναιμωτί 160 ἀνώροφος 111 άλύω 115 ἄναιρον 46, 71, 260 f ἀνωφελής 102, 111, 214 άλφός 40, 80 άνακηδής 104 ἀνώχυρος 111 αλώπηξ 22, 40 f, 68, 87 f άναοίγεσκον 58 άξιάω 261 άλωφός 40 ανάπνευστος 103 f άξιόω 261 αμ-, words beginning with, 42-3 ἀνάποινος 103 **ἄξων 135** αμα 152, 154, 208, 256 ἀνάπταιστος 104 ἀοιδός 56, 76 ἄμαθος 189 ἄναρ 46, 260 f ἀολλής 56 ἄμακις 208n άναρε(ι)ψαμένη 35 ἀορτή 57 Ανασίφορον 71, 260 ἀμαλδύνω 42 f, 49, 68, 72, 83 ἄπ 255 f άμαλός 42, 83 άνεμος 45, 110, 135, 139, 185, άπαξ 29 άμαρτάνω 35n, 42 f, 68, 86, 109 229, 238, 254, 268 ἀπαφεῖν 123n, 130n, 139 άμαρτή 146 άνερε(ι)ψάμενοι 35 ἀπαφός 125 άμαρυγή 72 άνευ 83 ἀπειλή 50, 52, 69, 85 ἄματις 208n άνεψιός 20, 45, 68, 106 ἀπέλλα 25 άμαυρός 42, 72 ανήκεστος 102 f, 110 *ἄπελος 66, 69, 89 άμαχητί 160 ανηκουστέω 102 f, 113 ἀπεχθέσθαι 224 ἀμάω 43, 83; ἄμητος 68 άνηλεγής 39, 100n ἀπηλεγέως 39 άμβλίσκω 83, 85 ἀνηλεής 102 ἀπήγρα 226 άμβλύς 83 άνήμελκτος 111 ἀπηύρα 81 **ἄμβροτος 243** άνήμετος 111 ἀπό 128, 135 ἄμβρυττοι 72 άνήμυκτος 111 ἀπόβλητος 218 f

ἀποέργαθε 62	ć
ἀποέργει 62	ć
ἀπογέρση 80 f, 83 f	ċ
ἀπόρρωξ 246	ċ
ἀποτέμνω 292	ċ
ἀπότομος 292	ć
ἀπρίγδα 24	ć
άπτερέως 24	è
αρ-, words beginning with, 32-5	ċ
ἄρα 33, 91	ë
ἄραδος 192	
ἄραμεν 262	i
άράμεναι 262	i
ἀραίρηκα 117, 119	i
άραρίσκω 35, 83, 235; άραρεῖν	ċ
34, 123n, 130n, 135, 139;	ć
ἄρηρα 115, 117, 119 f, 122 ;	è
άραρυῖα 121 f	č
ἀράσοντι 261	
ἀράσσω 34 , 119	Ċ
άρασχάδες 40	i
. ,,	(
ἄρατρον 261	ċ
'Αράτυος 261	
ἀράχνη 34	Ó
ἀράω 261	(
άργι- 34	Ċ
ἀργός 34 f, 46, 89, 127, 132, 183	Ċ
ἄργυρος 34, 127, 135	0
ἄρδω 34	C
'Αρέθουσα 34 f, 68	(
άρείων 234	(
άρεπυια 35, 37, 68, 71, 89, 122,	(
132, 155, 246	(
ἀρέσκω 34f, 116; -έσαι 129,	(
135, 234 f; ἀρήρεκα 116	(
άγρετευε 255	Ċ
άρετή 234, 248	Ċ
ἀρήγω 34 f, 68	ŀ
ἀρήν 12	Ċ
άρι- 34 , 91	C
ἀρίζηλος 262	C
άριθμός 34 f, 68	C
ἄριστον 34 , 95, 234	Ċ
'Αρίων 72	(
ἄρκευθος 38n	30
άρκέω 34, 83	č
ἄρκτος 35 , 133	Ċ
αρνέομαι 35	Ċ
άρνυμαι 35	ċ
ἄροσις 228	Ċ
ἄροτρον 140, 231	Ċ
ἄρουρα 231, 260	C
ἀρόω 35, 234, 261; -όσαι 129,	(
135, 231 ; ἀρηρομένη 117, 119 f	C

αρπυια 35, 37, 89, 122, 285 άρπάζω 34 f ἄρσην 35, 91 ἄσθμα 255 ἀσκαλαβώτης 72 ἀσκάλαφος 72 ἀσκαλέως 237 ἀσκαλώπας 72 ἀσκαρίζω **50**, 52 ἀσκεθής 183 άσκελής 237 άσπάζομαι 25, 27 ἀσπαίρω 50, 52 ἀσπάλαξ 72, 193 ἀσπάραγος 197 άσπαρίζω 50 άσπερχές 24 ἄσπετος 108 ασπίθιον 13 ἄσσα 157 ἀστακός 51 ἀσταφίς 18, **50**, 52, 72 f ἄσταχυς 29, 50, 52, 72 ἀστέμβακτος 50 ἀστεμφής 24 f, **50**, 52, 74 ἀστεροπή **51** f, 72, 194 ἀστήρ 51 f, 69, 87 f ἄστλιγξ 51 f, 72 ἀστράγαλος **51**, 180, 285 ἀστραλός 51 f ἀστραπή 51 άστράπτω 51, 72 (F)άστυ 30, 58, 76 ἀσφάλαξ 193 ἀσφάραγος 51 f, 69, 72, 197 ἀσφόδελος 51 ἄσχετος 108 hãτ' 146 ἀταλός 72 ἀτέμβιος 50 ἀτέμβω 50 άτενής 24 f, 27 ἀτέραμνος 192 ατι 157 Άτλας 55 ἄτρακτος 51 f ἀτραπός 24 άτρυγηφάγου 72 άττα 135, 147 ἀτταγήν 72 ἀτύζομαι 127 αὖ 135 αὐδή 56, 89, 127, 135 αὔελλα 57

αὐερύω 255, 260 αὔηρ 57 αὐθέντης 255 αὔλακες 40 αδλαξ 40, 277 αὐλάχα 40, 195, 277 αὐλή 57, 89, 127 f, 135 αὔληρα 64, 260 αὐλίζομαι 57 αδλις 57 αὐλός 178, 290 αὔξω 82, 89, 128, 135 αὐονή 167 αὖος 135, 178 αὔρα 57 αὐροσχάς 40 άῦσαι 51 αὐτάρ 34 ἀυτμή 57 αύω 51 f ἄφαρ 152 'Αφαρεύς 28 άφαῦρος 72 ἄφενος 51 f, 69, 110 ἄφερκτος 63 ἄφθιτος 108 άφλοισμός 24 άφνειός 52, 110 άχανής 24 f ἄχαντος 178n άχεύων 279 ἀχήν 129, 168 άχηνία 168 άχνυμαι 279 ἄχολος 192 άχομαι 113 ἄχος 129, 135 ἀψίνθιον 13 ἀωρέω 30 ἄωρος 58 άγώς 65 ἀωτέω 30, 58

βάθρακος 178n βαθύ-λειμος 110 βαίνω 279; ἔβην 167 βάλανος 195 βάλλω 219, 221 ff, 235, 238, 250 f, 279; ἔβαλον 217; βλῆτο 95, 220, 226; ἔβλην 278; βέβληκα 244 βαλλητύς 251 βάραγχος 197

βάραθρον 193, 206, 209, 215n,	-βρεμέτης 239	γέργερα 49
234	βρενταί 239	γέφυρα 194, 290
βάρβαρος 135	-βρέντας 239	γῆρας 201
βαρυόπαν 150	βρέτας 202	γίγνομαι 219, 225, 235, 243, 245;
βαρύς 11, 191 , 247, 249	βριαρός 184, 247	γέγονα 244, γέγαμεν 180
βασιλεύς 194	βριερός 184	γιγνώσκω 166, 281; ἔγνων 227
βάσις 290	βριθύς 247	γίσγον 65
βάτραχος 178η	βρίθω 247	γλάγος 191
βδέλλαι 238	βρίμη 243	γλαινοί 178
βέλα 62, 85	βριμός 54, 72	γλακτοφάγος 191
βέλεμνον 180, 222, 228 f, 235	Βριτόμαρπις 194	γλακῶντες 191
βελόνη 167	Βριτόμαρτις 194	γλάσσα 183, 246 f
βέλος 72, 180, 217, 235	βρόγχος 197	γλαύκη 290
βέρεθρον 193	βρόξαι 197	γλέπω 193
βέφυρα 194	βροντή 239	γλέφαρον 193
βῆμα 290	βρότος 243	γλήνη 199
βιβρώσκω 180, 193, 211 f, 227,		γλήχων 193, 216
233 f, 281; ἕβρω 278, κατέ-		γλωθρός 193, 216
βρως 226	βρύττος 72	γλῶσσα 155, 183, 246 f
βία 248	βρῶσις 211, 233	γλῶχες 155, 246
βίετος 248 f, 260 f	βρωτός 211, 233, 240	γλωχίς 155, 169; -ῖνα 156
βινέω 248, 252	βρωτύς 211	γναθμός 190
βίος 248	βωμός 167, 290	γνάθος 190, 246
βιοτή 248	βώτωρ 12	γνάφαλλον 190
βίοτος 248 f, 260	p. 12	γνήσιος 219 f, 228, 235
βιῶναι 227, 248 f	γαγγαίνω 135	γνόφαλλον 190, 292
βλαδαρός 42, 83	γάλα 191	γνωτός 166, 211
βλαδύς 72	γαλήνη 199, 206 f, 209	γόμφος 74
βλάξ 83, 198	γάλι 56	γόνος 10, 180, 235
βλαστάνω 215; βλαστεῖν 216	γαμβρός 235	γόνος 16, 166, 255
βλέπω 193	γαμέω 235	γραΐα 201
βλέτυες 238	γαμψῶνυξ 47n	γραιβία 201
βλέφαρον 193	γάνος 72	γραιτία 201
βλῆμα 228	γάρ 33	
βλῆρ 238	γάργαρα 49	γραῦς 195, 201 γρηύς 201
βλητός 219, 235	γελανδρόν 209	γριφασθαι 50, 72
βληχρός 49, 52	γελαρής 209	γυμνός 252
βλήχων 193 f, 216	γέλας 199	γύναι 147n, 177
βλωθρός 193, 215 f	γελάω 199	γύργαθος 190
βλώσκω 217, 233; μολεῖν 217;		γοργασός 150
ἔβλω 226	γελοίϊος 202	δαήρ 135
βορά 240	γέλον 202	and the second s
βορθο- 241	γέλως 201 f	δαίομαι 134 f, 174 f δαίς 135; δαιτ- 170
βορός 240	γενέθλη 228, 235	δάκνω 72
βοτήρ 12	γένεσις 228, 235	δάκρυ 21, 134; -υα 157
βούλομαι 76n, 244	γενέτειρα 155, 227 f	δαλάγχαν 13, 190, 209
βουλυτός 171	γενετή 228, 235	δάμαρ 191
βοῦς 177	γενέτωρ 227 f	δάμασις 198, 228
βοῶπι 156	γένος 180, 202, 217, 235, 252;	δαμασίφρων 228
βράγχος 197	-εα 152, 161	δάμνημι 198 f, 279
βράκαλον 193	γένυς 180	δάνος 185
βρακεῖν 197	γεραιός 201	δαρθάνω 191
βράξαι 197	γέρανος 196 , 206	-δε 153n
βρεμεαίνων 239	γέρας 195, 201 f	
Photogram and	10pm 172, 4011	δέατο 261

GREEK

Classical Greek

Chastea Greek	
δέατοι 262	δρᾶμα 191
δέελος 262	δρᾶναι 226f
δειδέχαται 114	δρατός 33
δειδίσκομαι 114	δράω 191
δείδω 172	Δρύοπες 194
δείελος 262	δρύοψ 194
δεικανάομαι 114	δρυτόμος 180
δείκνυμαι 114	δρώψ 45, 72, 246
δείλατα 238	δύο 147
δείρω 224	δυσηλεγής 39
δέκα 22	δύω 147
δεκανᾶται 114	δωτῆρες 288n
δέκτρια 155	δώτωρ 12
δελεάζω 238	5.5. tap 12
δέλεαρ 238	ε-, words beginning with, 52-4
δέλετρον 229	(see ελ-, εμ-, εν-, ερ-)
δέλευρα 238	EF-, words beginning with, 58-66
-δέλλω 221 f, 235, 237	ἔασσα 155
δέμας 198, 201, 291	ἐάω 53
δέμω 198, 201, 291	ἐγείρω 53 f, 69, 185; ἐγρήγορα
δέρη 193, 234	114, 116, 117 f, 120f, -9a
δέρω 206, 224	116f; ἐγήγερκα 116
δεσμός 185	ἔγκαρος 25
δετήρ 185	έγκέφαλος 25
δέφυρα 194	έγκυτι 243
*δηδέχαται see δειδέχαται	έγρηγορτί 160
δῆλος 261 f	ἔγχος 53
δημοβόρος 180, 234	έγώ 180
δηρός, *δραρος 88	γέδιμνος 66n, 129
διά 152	ἕδνα 58 f, 77, 79, 103
διαείσεται 59	ἔδοντες 55, 87
Διδυμήνη 13	έδύνας 54
δίδωμι 166, 175, 185	έδω 55, 110, 132; ἐδήδοται 117,
διεγέλα 199	119; -ώς 117, 119 f
διιπετής 240	ἐδωδή 125
Δίκα 147 f	ἐέδμεναι 77
Δινδυμήνη 13	ἔεδνα 58 f, 66, 68, 76, 79, 103
δινέω 248, 252	εεδνόομαι 59
δίννημι 248	ἐεδνωτής 59
δίννω 248, 279	ἐείκοσι 60-2 , 66, 68, 77
δίνω 248	εειρόμενος 77
δινωτός 252	εεις 77
Διόγνητος 220	ἐεισάμενος 59 f, 77
διώρυγα 37	ἐέλδομαι 62-4 , 66, 68, 76 f, 85
δμῆσις 198, 228	εέλδωρ 63
δμητήρ 12, 198	ἐέλπομαι 62, 64 , 103, 287
δοάσσατο 241	ἐέλσαι 62
δολιχός 209, 222, 237	ἐεργαθ- 62 f
Δόλοπες 194	ἐεργνυ- 62 f
δόμορτις 191, 292	ἐέργω 62 f, 66, 69, 76, 78-81
δόσις 185	ἔερσα 64, 260
δοτήρ 12, 185	έέρση 30, 59, 64, 66, 69, 71,
δοτός 242	76-8, 93 f, 124, 254, 273, 276
δοχμός 183 , 185	εερσήεις 64
00 MMOG 100, 100	ooporion of

```
ἐέρχατο 63
  ἔζελον 221, 227
  ἔθειραι 53, 69
  έθείρω 53, 69
  έθέλω 53, 69, 72
  ἔθνος 222n
  έθρις 53, 71
  είδήσειν 251
  εἴδομαι 59 f; see ἐεισάμενος
  είδος 59
  εἴδωλον 59
  είθαρ 152
  εἰκῆ 53, 285
  εἴκοσι 60-2, 66, 77; ἐϝίκοσι 23,
    254
  είλέω 62, 64, 239; see ἐέλσαι
 εΐλη 62, 66, 69, 76, 85, 259
  είλίονες 57, 71, 85
  είλίσσω 62
α εἴλλω 62
α είλύω 62
  εΐλω 56
  εἰμί 91; ἦσθα 181
  είνατέρες 57, 195
  είνοσίφυλλος 236
  εἶπον 77, 80, 226n
  Εἴρανα 147 f
  εἴργω 62 f, 66
  εἴρερον 63
  εἰροκόμος 180
  εἰρύομαι 37
  είς 24, 77
, ἐίση 65 f, 77, 289
  έκασσα 155
  έκατόν 53 f, 62
  έκατ-ώρυγος 260
  Fhεκάδαμος 195
  Γεκεδαμος 195
  ἐκεῖ 24
  έκητί 160
  ἔκτημαι 24
  έκτός 47
  έκών 53, 93, 124
  ελ-, words beginning with, 40-1
  Fέλα 85, 254
  έλαύθερος 260
  ἐλαύνω 41, 197; -άσαι 132;
    ἐλήλα-κα 68, -μαι 117, 119 f,
    132
  ελαφρός 20, 41, 68, 70
  ελαχύς 20, 41, 68, 70, 72
  έλάω 132
  (F) έλδομαι 62-4
```

ἔλδωρ 63 f

6) 64mm 41 68 02 63 63 64 64 64 64 64 64 64 64 64 64 64 64 64	àmiés 20 22 4E £ 60 07 02 122	3-6 115 110
116, 118 , 120	èννέα 20, 22, 45 f, 68, 87, 92, 132	
έλεῖν 226 f	ἐννεόργυιος 37 ἐννέπω 27	ἐρέσσω 234; -έσαι 135
έλελίζω 41		ἐρέτης 36 f, 132, 234, 259
	έννέσιαι 185	έρετμόν 135 ² Εράτουν 155, 224
έλεος 41, 68	έννοσίγαιος 236	Έρέτρια 155, 234
ελετρυγονα 71	εννυμι 79 , 91, 93; εσται 124	έρεύγομαι 36 f, 68, 87
έλεύθερος 25, 41, 68, 94, 259,		έρεύθω 36 f, 68
289	ἐνοσίχθων 231 , 236	ἐρευνάω 36 f, 68
έλεύσομαι 41 , 68, 289; έλή-		έρευνίοντες 260
λουθα 113, 116, 117 , 120 f,		ἐρέφω 36 f, 38n, 68, 70 f, 82, 229
168, 268	έντενής 26	ἐρέχθω 36 f, 68, 82
έλεφαίρομαι 38n, 41	έντεσιεργούς 236	γεγρημένος 219
ελη 62, 85, 254	ἔντονος 26	ἐρῆμος 36 , 68, 259, 262
ἐλινύω 84, 240	ἔνυμα 229 f	έρι- 34 , 91
ἕλιξ 62	Ένυμακρατίδας 47	ἐρίζω; ἐρήρισται 116, 118
έλίσσω 62	έξαιτραπεύω 18	Έρινύς 36
"Ελλοπες 194	έξατράπης 18	°Ερίων 72
έλούθερος 260	ὲ ξεσίη 185	ἔρκος 83
ἔλπομαι 62, 64, 77, 103	έορτή 91	ἔρμα 83
'Ελπήνωρ 64	ἕπ 255 f	ἔρνος 36, 222n
ἐλπίζω 64	ἐ πάριτοι 108	ἔρξα 78, 80 f
έλπίς 64	ἐπέλευσαν 260	ἕρξα 78
ἔλπω 64	ἐπελευσεῖ 260	-hερξοντι 76, 79
έλπωρή 64	ἔπηλυς 122	ἔρος 201 f
εμ-, words beginning with, 43	ἐπί 27, 67	έρπετόν 190
έμέ 20, 43	ἐπίκλησις 219	έρράδαται 34
ξμεσις 228, 234	έπιλίγδην 84	
έμετος 234	ἐπισκύνιον 243	ἐρρήεντα 64
and the second s	- Control of the Cont	έρσαῖα 64
έμέω 234; ἐμήμεκα 116	έπισχερώ 146 έπους 125	ἔρσεο 38
έμμεμαώς 26 f	ἔποψ 125	έρση 59, 64 , 76-8, 94, 254
έμός 43	ξπω 67, 83	έρσήεις 64
έμπάζομαι 26	έπώιχατο 63	ἔρσην 35, 91
εν-, words beginning with, 45 f		έρσώδης 64
ἐναλίγκιος 26	ἔρ 33, 91	έρυθρός 25, 36, 70, 82, 183, 259
ἔναντα 26	ερ-, words beginning with, 36-7	
ἔναρα 255	εραμαι 201 f	ἔρυμαι 37
ένατηρ 195, 228	ἔραννα 147 f	ἐρύω 37
ἐνδελεχής 209, 237 f	ἐραννός 201	ἔρχαται 63
èνεγκεῖν 45 f, 70, 92-4, 115 f,	-	ἐρωή 37, 68, 70, 72, 76, 262
123n, 131, 236; ἐνήνοχα 46,	22 1 12 12	ἔρως 201 f
116f, 118 , 119f, 131; ἐνή-	_{Fερε-/} _{Fρη- 238}	ἐσκέδασμαι 73
νεγμαι 116, 118	ἐρέβινθος 36, 195	ἔσπερος 30
ένεκα 53	ἔρεβος 20, 25, 36 f, 39, 52, 68, 87	ἔστια 30, 64
ἐνενη-(κοντα) 45 f	ἐρέθω 36, 38n, 68, 236	ἐτεός 158, 287
ἐνένιπε 129n, 130n	ἐρείδω 36 f, 68; ἐρήρεισμαι 116,	έτερόγνητ- 291
ἔνερθε 24, 45 , 72	119, ἐρηρέδαται 116, 119;	
ἐνέρτερος 45	ήρήρειστο 117, 119 f	ἔτος 93
ένετή 185	ἐρείκω 36 f, 68; ἐρήρεικα 116;	
ένθεῖν 45, 118, 132; ἐνήνοθε 46,		ε ὕ 67
68, 116, 118, 120, 132	ἐρείπω 36 f, 68, 82, 168; (κατ-)	
ĕνι 27	ερήριπε 115 f, 118 ; -μμαι 116;	
ἐνιπή 129, 168	see ἐρέριπτο	εὐήνωρ 75, 185n
ἐνισπεῖν 129n, 130n	hερεμες 37	εὐηφενής 52
ενίσσω, see ενένιπε, ηνίπαπε	ερέπτομαι 35-7, 68, 71	εὐθενέω 52, 183
	Sparroport 22 1, 00, 11	5555 YOU 52, 103

εὐθηνέω 183 εὐλάκα 40, 195, 260, 276 f εύληρα 64 f, 66 εύρίσκω 65 εὐρύοπα 148, 150 εὐρύς 65 f, 287 ἐύς 53, 287-9 ἐύτμητος 218 εὔχομαι 90 ἔφαλος 156η ἐφέρξοντι 62 ἐχθές 24, 53 f, 72 ἔχω; σχεῖν 24 έψω; έψησόμενα 67 **εως 65**

ζάει 248 ζάω; ζῆν 248; ἔζησα 227 ζειαί 97 ζέλλω 235 ζέρεθρον 193, 210, 215n ζεστός 96 ζεύγνυμι 97 Ζεύς 174; Ζεῦ 149 f Ζέφυρος 97 f, 131 ζέω 96, 97 ζυγόν 66, 96, 97 ζύμη 97 ζωφράφειν 252 ζωστός 96, 97 ζώω 248; ἔζωσα 227

ήβη 183 ήδονή 167 ήδύς 179, 287 ήέλιος 175n **ἠερι- 34** ήια 97 ήλιος 62 ημαρ 46, 152 f, 202 ήμεκτεῖ 66 ήμέρα 46 ήμερος 96 ήνεικα 226n -ηνεκής 45 f, 68, 70, 122 ηνίπαπε 123n, 129n, 130n ήνοψ 194 ήπαρ 33, 289n -ηπελ- 89 ήπεροπευτά 150 ήπεροπεύω 194 ηπύτα 148 f Ηπυτίδη 149 ήπύω 148

ήρέμα 193, 262 **ἦρι 95** ήυγένειος 287 ήύκομος 288 ἠύς 288 f ήχέτα 149 ἠώς 65, 165n; -ῶ 289

-θα 181 θάλασσα 13, **190**, 209 θάλλω; τεθαλυῖα 122 θάλπω 290 θαλυκρός 290 θαλυσσόμενος 290 θαμά 152, 159 θαμβέω 178η θάμβος 74, 177, 178n θάνατος 199, 201, 206 f θαρνεύει 216, 232 f, 279 θάρνυμαι 212, 232 f, 239 f, 251 θαῦμα 40, 177 f -θε 153n

θεά 177 θείνω; θενεῖν 225, 227 θέλω 53, 72

θέναρ 153 θεόδμητος 291 Θεόπρωτος 211 θεός 211n θέσκελος 211n θεσμός 185 θεσπέσιος 211n Θεσπρωτοί 211 θέσφατος 211n θῆβος 177, 178n θήγω 168 θηλή 175 θήλυς 175 -9nc 181

θέμις 185

θνήσκω 199, 244; ἔθανον 206, 223, 225, 227

θνητός 168n, 199, 207 θοίνη 174 θόρνυμαι 232 f, 240 θόρυβος 233 θοῦρος 218, 239

θράσσω 199 θρέομαι 233 θρόμβος 177η θρόνος 168 θρώναξ 72

θρώσκω 216, 233, 239, 260; ἵστημι 235; -α- 166 θορεῖν 217, 232

θυγάτηρ 180, 209, 228, 259 θυμοβόρος 234 θυμός 169 θυοσκόος 50 θυραγορος 79 θωμός 166 f θῶσθαι 174 9ῶ(υ)μα 40, 177

ιαίνετο 171 ιάλλω 123n, 129 ιανατερα 195 ίάπτω 129, 130n, 168 ίαρός 184 f, 215, 261

ιάτωρ 12

ἰαύω 30, 57, 89, 127, 129, 171 ἴγκρος 25, 243, 245

ίγνητες 291 **ἔγνυντο 73, 76** ίδεῖν 79 ίδρώς 277 (_F)ιδυῖα 155

ίερός 77, 182, 184 f, 193, 215, 252, 261

ἰητήρ 12 ίθαίνεσθαι 129 ίθαρός 50, 129, 134

ίθρις 71 (F)ίκατι 62, 254 ίκμαμένος 128 ϊκταρ 19 ίκτέα 128 ἴκτινος (-ῖ-) 19 ἴκτις (-ίς) 19 ίλάσκομαι 245η ίλημι 245 ἴονθος 74 ίοχέαιρα 279 ίππαμολγός 94 ίππηλάτα 148 f ίππόδαμος 198 ίπποκόμος 180

ίππότα 148 f *ἴπτομαι 129, 130n ίρός 86, 182, 254

ἴρος 77, 184, 256, 260 f, 267 ίσος 65 f

FIσ**F**0ς 65 hισος 79 ἴσσασθαι 128 ἴσ(σ)η 128, 155 ιστήλη 18 ίστρατιώτης 18

Ίστρος 184 ίστωρ 79 ὶτέα 239 ἴτυς 239 ίυγή 51 ἴφθιμος 19 ίχανάω 129, 168 ίχθος 19, 23 -κα 153n καίω 226 κάλαθος 190 κάλαμος 195 f, 206, 229 f, 240 καλαυρόφις 246 καλαδροψ 194, 246 κάλαφος 72 κάλεσις 228 καλέω 38, 192, 235 f Καλήσιος 235 καλήτωρ 235 κάματος 199, 201, 223, 234, 237, κάμνω 198 f, 201, 244, 251, 279; **ἔκαμον 221** κάμπτω 134 κάναδοι 190 κάναθρον 193 κάνασθον 190 κάναστρον 190 καναχή 192 κάνθαρος 74 κάπρος 134 κάρα 25, 198 κάρηνα 199, 206 f κάρρων 40 κάρτα 159 κάρτων 40 κασίγνητος 153, 218-20, 235, 259 κατά 33, 152-4, 219, 255 f; κάτ 255 f καταγελάμενος 199 καταγελμένος 62 καταί 153 κατακέρασις 199 καταρράκτης 34 κατασώχω 182 κατήορος 57 κατι [γνειτος 153, 219 κάτω 153

κατωρίς 57

καυνός 134

καυάξαις 255

καυλός 178, 290

καχάζω 135 καχλάζω 29 κεῖ 24 κέλαδος 192, 206 κελαρύζω 192, 202 κέλευθος 38η κελεύω 38 κέλλω 24, 235 κέλομαι 235 f. 243 κέλωρ 192, 202 κενεός 20, 158, 287 κένωμα 20 κεραίζω 197 κεραίω 198 κέραμος 191, 206 κεράννυμι 198 f, 227, 279; κεράσαι 191 κερα(F)ός 198 κέρας 198, 201 f, 239 κέραυνος 197 κέραφος 190 κεράω 198 κερβολοῦσα 190 κέρτομος 190 κεφάλη 25 κίατο 248 f κιδάφη 13 Κιερόν 193 κιθάρα 74 κιθών 178η κιμβάζω 50, 72 κιμβεία 74 κίμβιξ 74 κινδάφη 13 κινδαψοί 74 κινέω 248 f. 252 κίνυμαι 240, 248; ἔκιον 279 κινώπετον 190 κίρνημι 198 κίχραμος 13 κίχρημι 245 κμέλεθρον 193, 195, 215n, 290 κναδάλλεται 190 κναίω 190 κνάπτω 190 κνέφαλλον 190 κνέφας 202 κνῆκος 190 κνήμη 196, 229, 240 κνουπεύς 190 κνώδαλον 190 κνώδων 190 κνωπεύς 190 κνώψ 190

κλάγος 191 κλέπτω 247 κλη- 260 f κλήδην 235 κλῆσις 219, 228, 235 κλητός 218 f, 235 κλόνος 168, 244 κλοτοπεύω 180, 194 κλώθω 190 κλώψ 247 κόγχνη 290 κόγχος 181η κοέω 50 κόθαρος 292 κοινάω 261 κοινόω 261 κόλαφος 206, 241 κολούω 38 κολύμφατος 13 κολύφανον 13 κόμπος 190 κόναβος 190, 206, 241 κονιορτός 240 κονίς 290 κόραξ 196 κόρδαξ 240 κορέννυμι 233 f, 279; -έσαι 231 f, 239 Κόρινθος 177η κόριψ 239 κόρνοψ 72, 193 f κόρση 239, 276 κόρυμβος 74, 177n, 198 κόρυξ 239 κορυφή 74, 198; -ος 177n κόρυψ 239 κορώνη 196 κούρος 218, 239 κόχλος 181η κρᾶσις 199, 214 κραταιός 191, 249 κρατερώνυξ 47n κρατήρ 199 κράτιστος 40 κράτος 40 κρατύς 249n κρέας 201 f κρεμάννυμι 199; -άσαι 227 κρέσσων 40 κρέτος 40 κρήμνημι 199 κρημνός 199 κρίμνημι 199 κρούω 38

κρυερός 201 κρυμός 201 κρυφᾶ 146 κρωτάνεροι 232 κτάομαι 19 κτάρα 19 κτείνω 19, 225 κτέρας 202, 291 κτερεΐζω 291 κτιδέη 19 κύαθος 190 κύαμος 129, 195, 249 κυανοχαῖτα 148-50 Κυανόψια 193 κυβιστάω 13 κύγχραμος 13 Κύδνα 193 κύμβαχος 13 κύμηχα 129 κυνοῦπες 190 κυνῶπα 150 κύτος 243 κυών 247 κῶας 202

λαγαρός 84 λαγχάνω 134 λαιός 134 λαλέω 135 λαμβάνω; ἔλαβε 80 λαπαδνόν 80n λαπάζω 72 λαπάρη 80, 84 λαπαρός 80 f, 83 f λαπάσσω 80 λαύκη 290 λάχεια 72 λέγω 26, 39 λεῖμαξ 81, 83 f -λειμος 110 λειμών 12, 110 λείπω 22, 90 λέπαδνον 80n λέπω 42, 72, 193 λευκός 22 λήγω; ἔληγε 80 ληκέω; λελακυῖα 122 λήκυθος 190 λῆναι 72 λῆνος 195, 239 λιάζομαι 84 λίγδην 83 f

λιμήν 12

λίμνη 12

λίναμαι 84, 240 λιπ- 40, 72 λιπαρός 80, 83 f λίπος 80 λζ 287 λοετροχόος 232 λοιγός 42, 72-4, 84, 254 λοΐσθος 76 λοξός 22 λούω 22, 234; λοέσαι 231 f λόφος 80 f

λύω 171

μαιμάω 182 μαίνομαι 279 μαίομαι 182 μακρός 183 μάλα 152 μαλακός 80, **81**, 83, **198**, 208 μαλάχη 72 μάμμα 135 μάραθρον 193

μαραίνω 83-5 μαρμαρυγή 72 μάρναμαι 84 ματεύω 182 μαυρόομαι 42 μαυρός 72 μένα 149 153

μέγα 149, **153**, 161, 180 μεγαλο- 208 f μεγαλωστί 160

μέζων 234; -ω 152, 254 f μέλαθρον 193, 195, 215n, 290 μέλδομαι 42, 72 f, 85-7, 95, 254 μέλδω 83 μελεϊστί 160 μελίβδεσθαι 129n μεμαώς 26 μέμονα 244 μέρδει 43, 73, 84, 254

μέδιμνος 66n, 129

μερθεῖσα 43, 73, 84 μέριμνα 129

μέροψ 194 μετά 153 μέτρον 183 μιαρός 184 μιερός 184

μηκάομαι 183; μεμακυΐα 122

μῆκος 183 μήν 22 μητίετα 148 μίνθος 74 μοῖος 83 μοιχός 43, 71-4, 254 μολάχη 72 μόλγος 76 Μολοβροί 194 μολόχη 72 μονός 158, 241 μόρξαντο 72 μορφή 239 μις 19 μιώλυς 83 μιώμαι 182

να- 98-113 ναμερτής 42, 99, 104 νᾶσσα 197 νε(γ)αρός 22 νέκταρ 105 f, 160, 266 νεόβορον 240 νεογνός 243, 244 f νεόδματος 198 νέποδες 45, 105 f νέρθε 24, 45, 72 νέρτερος 45 νευρά 95 νεῦρον 86 f, 254 νεφεληγερέτα 148 νέφος 74, 79 f, 92 f νέω 86 νεώβορτον 240 νη- 98-113 νηγάτεος 99 f, 103, 106 νήγρετος 99, 101 f, 106 f, 108, 220 νηδεής 99 f, 102 νῆϊς 99 f, 101, 103, 107, 113 νηκερδής 99 f, 101, 103, 113 νηκέρως 99 f, 102 νήκεστος 99, 101 f, 103, 106, 110, 112 νηκουστέω 50, 99, 101 f, 106 f

νηλεής 'pitiless' 99, 101 f, 104, 106, 108, **109**, 220 νηλειτέες 109, 289 νήλευστος 99 f, 102 νήλιπος 99 f, **111** νηλιτέες 109 νηλίτιδες 99, 101 f, 106, **108** f, 289 νημερτής 99, 101 f, 103, 106 f,

νηλεής 'unavoidable' 99, 101 f,

νηλεγής 26, 99 f, 108

104, 106, 108

108, **109** νημηθής 99 f

νηνεμίη 99, 101 f, 104, 106, 110,		ολισθράζω 260
113	ὄγμος 128, 167	*ởλκ- 92
νηπαθής 99 f, 101 f	ὄγχνη 290	öλλυμι 42 , 110, 250; ολέσαι
νήπαυστος 99 f, 101 f	δδάξ 54 , 56, 285	131; ὄλωλα 117, 119, 120-2
νηπεδανός 99 f	δδάξω 54	δλμος 240
νηπεκτής 99 f	δδελός 54, 194	ὄλοκ-ες 44, 277
νήπεκτος 99 f, 102	όδολκαί 194	όλολυς 125
νηπελέω 99, 101, 106, 108	δδός 83	ολόπτειν 42 , 72, 193
νηπενθής 99 f, 101, 103, 113	δδύνη 54 f, 71	ὄλος 241
νηπευθής 99 f, 102		ολούφω 42, 72, 193
νήπιος 99 f, 106, 111	116, 118, 120	όλοφύρομαι 42
νήπλεκτος 99 f, 102	δδωδή 125	ολοφώϊος 38n, 41
νήποδες 105	οδών 22, 54-6 , 69, 71, 76, 110,	
νήποινος 99 f, 101 f, 103, 113	247	oμ-, words beginning with, 43-4
νηπυθής 99 f	δείγην 58	őμαδος 192, 206, 241
νήπυστος 99 f, 102	ὄζος 24, 131, 140	ομαλός 196, 208
νηπύτιος 111	ὄζυξ 24	ὄμβριμος 54, 72
νήριθμος 99	ὄζω 131, 139; ὄδωδα 113, 117,	ὄμβρος 74, 140
νήριτος 99, 101, 106, 108	119 f, 125	ομείχω 22, 43 f, 68, 71 f, 74, 254
νῆσσα, 91, 197	ὄθη 53	δμηγερής 28
νῆστις 99, 101 f, 106 f, 110	δθομαι 110	ομήγυρις 28
νήτιτος 99 f, 102	οθόνη 167	ομίχλη 22, 44, 68, 71
νητρεκής 99 f, 102, 113	ὄθρις 71	ŏμνυμι 44 , 139, 172, 234, 236,
νήυτμος 100, 106, 111	οἴγνυμι 58 , 68	252; ὀμόσαι 131, 231; ὥμοσα
νήφρων 100, 102, 113	οίδα; οίσθα 181; είδώς 121	170; ὀμώμο-κα 116f, 120,
νόθος 103n	οίδέω 139 f	172; -ται 117, 119 , 166
νύμφα 147	οιέτεος 24	ỏμο- 139, 260
νύμφη 74	οἰκοδόμος 198	δμόγνιος 244
νύξ 47, 252	οἰνή 139	όμοίιος 234
võ 248	οίνοποτάζω 176	ομοκλή 243
νω- 98-113	οΐομαι 58 , 68	ομομοκον 259
νωδός 55, 100-2, 106 f, 110 f,	- I	δμόργνυμι 43, 44, 68, 71 f, 83,
113, 214	οἰρών 175	124; see ὄμαρξον, μόρξαντο
νώδυνος 100-2, 106, 110	ὄ(F)ις 130, 139	όμός 24, 154, 196, 208
νωθής 100-2, 106 f, 110	οίσος 239	ὀμφαλός 44 f, 47, 74, 92, 131,
νωθρός 100, 113	οἶτος 128	177n, 229
νωλεμής 100 f, 103, 106, 108,		δμφαξ 74
110, 111; -ές 214, 236 f	οἴχομαι 130	όμφή 74
νώνυμ(ν)ος 100-2, 106, 108,		όμώλακες 40
110, 214	δκιμβάζω 50, 72	όμωμόκαμες 260
νωρεῖ 75, 254	ὀκορνός 72	ὄν 208n, 223, 260
νῶροψ 111, 194;-οπι 75 f, 185n, 254		ov-, words beginning with, 46f
νωχελίη 100, 103, 106, 108,	ὄκταλλος 193 ὀκτώ 147	ονα- 259
109 f, 214; -εια 113	-οκωχή 125	ὄναρ 20, 46, 131, 152 f, 260
νώψ 100, 102, 106, 111	ολ-, words beginning with, 41-2	'Ονασι- 260
100, 102, 100, 111	ολέκω 92	10
o-, words beginning with, 54-6	ολιβρόν 42 , 68, 83-6	Όνασίφορος 71 ὄναται 262
(see ολ-, ομ-, ον-, ορ-)	όλιγηπελέων 66	
ὄαρ 24 f, 54	ολίγος 20, 22, 25, 42, 68, 72, 74,	ὄνειδος 22, 25, 46 f, 68, 87
ὀβελός 54 , 56, 72, 194	83 f, 87, 254	
δβολός 194	ου του του του του του του του του του τ	131, 139, 260 ŏv9oc 74
ὄβριμος 54 , 56, 72, 243	14 01	ὄνθος 74 ὀνίνημι 47, 95, 130n; ὄνητο
ὀγάστωρ 24	ολισθεῖν 75, 84 f	123n, 266, ἀπόνηθ' 262
	-	. , ,

1 15 100000 20000		
ὄννα 58	οροφα 38	πάθνη 178η
òvo- 262	ὀροφή 36, 70 f, 76	παιπάλη 29
ὄνοιρος 46, 260	ὄροφος 38n, 71, 229	παίω 251
ὄνομα 20, 22, 38, 47, 92 f, 110,		παλάθη 200
214, 229-31, 292	όρυμαγδός 192	παλάμη 195, 200, 206
ὄνομαι 47, 231, 234, 250, 262;		
ἀνοσάμην 262	116, 118 ; -γμαι 116, 120	παλαστή 200
ονομαίνω 230		πάλλω 237, 251
δνοστός 262	δρφανός 44, 131 ******* 20	παμφαλάω 29
ονοτάζω 262	ὄρχις 39	πανδαμάτωρ 198
The state of the s	őç 96	Πανόψια 193
ονοτός 262	ὄσσε 20, 83, 139, 158	πάρα 33, 152, 208n, 219, 255 f;
-οντα; φέρ- 152	ὄσχη 24	πάρ 255
ὄνυμα 252	όστακός 51	παραβλήδην 235
ὄνυξ 44, 47 , 68, 87, 92, 229, 252		παραί 153
259; ὀνυχ- 181n	ὀστέον 51, 130 , 139 f, 179	παραρρητός 219
όξύα 139 f	ὄστλιγξ 51, 72	παράχρημα 256
όπ- 131, 139 f; ὅπωπα 55, 117,		παρθενοπῖπα 150
120-2 , 125, 129, 166	ὄστρειον 51	Παρμησσός 194 f
ὄπατρος 24	őτε 98	Παρνασσός 194 f
hóπε 146	οτι 157	πάρνοψ 193 f
ὀπιπ-(εύω) 55, 129, 168	ὄτλος 55 f	πάρο 208n
ὸπτίλ(λ)ος 193	ὄτριχες 24	παρός 215
οπυίω 55 f	ότρυγηφάγος 72	πατάνη 188, 209
ὀπωπή 125, 129	ότρύνω 24	πατέομαι 168
οπώρα 215n	oủ 105, 112	πατήρ 11, 90, 182, 228, 268
op-, words beginning with, 37-9	ov 76n	πάτος 179
ὀρ- 131, 139	οὖδας 202	πατρίδα 285 f
όράω 79, 116; ἐόρακα 116;	οδθαρ 292	παῦρος 178
όρώρηκα 116f, 119	Οὐκαλέγων 26	παφλάζω 29
ὀργάω 240 f	οὖλος 239	πέ 255 f
ὀργή 217, 240 f, 254	ούνεκα 76η	πεδά 255 f
ὄργυια 37 f, 89, 92, 122	οὔνεσθ' 262	πέδιλον 155
ὄρεγμα 260	οὐρέω 64, 76	πέζα 155
όρέγνυμι 44	οὖς 139, 168	πείρω 199
όρέγω 37-9, 47, 68, 82, 122, 166;	-ουσα, φέρ- 155	3.00 J C C C C C C C
όρωρέχαται 63, 117, 118, 166		πέλαγος 200, 206
όρεσχάς 40	ὀφείλω 56 , 69, 225-7 , 259 f	πέλανος 200, 206
ὀρεχθεῖν 38 f, 68, 72, 74	οφέλλω 56, 69, 87, 259 f	πέλεθρον 229
Foρθo- 241		πελεμίζω 237
ὀρθός 217, 241 , 254	ὄφελος 52, 56, 259	πέλωρ 201
οριγνάομαι 44, 130n	όφθαλμός 193 Fοφληκόσι 56	πεμφρηδών 74, 194
ὀρίνω 38 f, 68		πεντήκοντα 157
'Ορίγων 72	δφλισκάνω 225	πέποκα 146
όρκομοτας 259	ὀφρυγνῷ 260	πέρα(ν) 199
ὄρνις 38, 130 , 139 f	όφρῦς 24, 31, 56, 69, 77n, 171,	περάω 199 f
	260	πέρθετο 224
ὄρνυμι 36, 38 , 130, 132, 171 f, 240; ἄρετο 224; ὅρωρα 113,	ύχλος 109	πέρι 199, 219, 255; πέρ 255
		περιημεκτέω 66
115, 117, 120, 122	ὄψε 153n	περισκελής 237
ορόγυια 35, 37 f, 89, 122, 132,	ὄψον 24	περκνός 247
155, 169, 246, 260	δλεθρος 236	Περμησσός 194 f
ὀροθύνω 38n	δλέκω 236	πέρνημι 199 f, 232, 239;
ὄρομαι; ὀρώρει 116f, 119	όλετήρ 236	περάσαι 232, 239
ὄρος 131	öλλυμι 236	περόνη 167
ὀρούω 38 f, 68, 71		πέταλον 188, 206

πετάννυμι 188, 20 9	ποδηνεκής 122	πρόξ 247
πέτομαι 240; ἔπτατο 189, 248	ποιμαίνω 12	πρότερος 214
Πευμάττιος 194	ποιμήν 12, 135, 139, 168, 170,	
πήγνυμι 183	173 f	προῦτος 214
πηνέλοψ 194	E SECTION OF THE SECT	πρυμνός 47
	ποίμνη 12	πρώαν 215
πῖαρ 169, 177n	ποινή 167	πρώην 215
πιαρός 184	πόλις 218	πρωΐ 215
πιέζω 27	πολλά 157	πρώϊος 215
πίειρα 155, 169	πολλάκις 157	πρῶκες 247
Πιερόν 193	πολλή 218, 241	πρωκτός 21, 88, 216, 247
πιερός 184	πολύ-κμητος 201	πρωτός 211
πίθος 194	πολύς 218	to the second control of the second control
πίλναμαι 199, 250η; πελάσσαι	πολύτλας 201	πρῶτος 214 , 216, 233
199; πλῆτο 226; πέπλημαι	πόμα 176 f	πταίω 178
188	A STATE OF THE STA	πτάκις 246
	πομφόλυξ 74	πτήσσω 183, 246, 290
πίμπλημι 235, 245, 252; πίμ-		πτώξ 246
πλαμεν 246; πλῆτο 95, 174,	, , , , , , , , , , , , , , , , , , , ,	πτώσσω 290
220, 226f	πέπρωται 211	Πυανεψιών 193
πίμπρημι 245	πορθμός 239	Πύδνα 193
πῖνον 176	πόρνη 239 , 241, 254	πύνδαξ 74, 177n
πίνω 175-7 , 251 f; ἔπιον 250n	πόρνοψ 193 f	πυθμήν 74, 177n
πιπράσκομαι 200; -ω 200	πόσις 'drink' 176f, 183	πῶμα 174, 176f
πίπτω 189, 225, 240, 252	πόσις 'husband' 139 f	πώποτε 147
πίστρα 176	ποταμός 189, 206, 240 f, 254	
πιτνέω 240	πότηρ 176	πώς 247
πίτνω 251 f	ποτήριον 176	πῶυ 135, 168, 173
πιφαύσκω 178	ποτής 176	5 22
πλαγά 200	πότης 176	ρα 33
πλάθανον 179, 181, 188, 200,	ποτί 255; πότ 255 f	ράβδος 246
246		ραθάμιγξ 34
πλακερός 181	πότιμος 176	ραιβός 178
	πότις 176	ραίνω 34
πλακόεις 200 Πλάκος 200	πότμος 189, 240 f, 254	ράμνος 246
VA CONTRACTOR STATEMENT	πότνα 156	ράπτω 24 6
πλακούς 181, 200	πότνια 155 f	ράσσατε 34
πλάξ 200	ποτόν 176	ράττω 34
πλάσιον 214, 219	ποτός 176 f, 183, 185	Fρε- 259
Πλάταια 155, 179	πρᾶγμα 200	ρέζω 24, 74
Πλαταιαί 249η	πρακνόν 247	ρέμβομαι 246
πλατίον 199	πρᾶν 215	ρέπω 246
πλατύς 179, 181, 249n	Πραράτιος 215, 261	Fρη- 260 f
πλέθρον 229	πράσσω 199	F ρηγ- 20 9
πλεῖος 174	πρᾶτος 214-6, 260	ρήγνυμι 183, 246
πλείων 174, 218; πλεῖστος 171,	πραΰς 195	ρῆσις 238
174, 218	πρειγυς 158	ρητήρ 12, 238
πλέων 174	πρεκνός 247	ρητής 218 f, 238
πλέως 174	πρέσβα 156, 158, 201	
πληγή 200	πρέσβυς 158	ρήτρη 238
πληθῦς 158η, 171, 174	πρήσσω 200	ρήτωρ 12
πλήρης 219		ρίμφα 159
Πληρόσια 215	πρίατο 247-9 , 279	ρίπτω 189
πλησίον 199	πρισγειες 158	ροΐβδος 192
πλήσσω 196 , 200, 246	πρισγουτερος 158	ρόπαλον 193, 2 46
	πρό 214	ροχθεῖν 38, 72 f, 75
πλίνθος 74 πλύνο 21	πρόαν 215	ρυκάνη 24, 74
πλύνω 21	Προηρόσια 215, 261	ρυτός 108

Ciussicai Greek		
ρώξ 246	σμίνθος 74	σφάλαξ 193
ρώομαι 72	σμοῖος 83	σφάλλω 235
ρώψ 246	σμυός 83	σφαραγέομαι 51, 197, 206
•	σμῶ 248	σφάραγος 72, 197
σα 157	σομφός 74	σφεδανός 188
σαλάβη 13	σόος 249	σφένδανος 188
σαλάμβη 13	σπαίρω 50	σφενδόνη 167, 188
σάμβαλον 194	σπάλαθρον 193 f	σφοδρός 188, 216
σάνδαλον 194	σπάλαξ 72, 193	σφόνδυλος (-η, -ιον) 188
Σαγοκλεγης 249	σπάλαυθρον 193	σχέραφος 190
σάος 249	σπαργάω 197	σχιδαλαμός 194
σατράπης 18	σπαύλαθρον 193	σχινδάλαμος 194
σαχνός 182	σπάω 27	σχινδαλμός 194
-σε 153n	σπείρω 206	σῶος 249
σέβας 202	σπινθήρ 74	σῶς 195, 249
σελαγεῖν 201	σπόνδυλος (-η) 188	owg 193, 249
σέλας 201	σταυρός 179	50 152n
σελήνη 199	I. Day and a	-τα 153n
σεύομαι 226; ἔσσευα 278	σταφίς 18, 50, 72 f σταφυλή 50, 72	ταγήν 72
σήπω 183		ταλα- 206
No. 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10	στάχυς 29, 50, 72	ταλαεργός 201
σκαίρω 50	στεμβάζειν 50	ταλαός 201, 208
σκαλαβώτης 72	στέμβω 50	τάλαρος 201
σκάλαυθρον 193, 195	στέμφυλον 51	τάλας 201
σκάλεθρον 193	στενάχω 192	ταλασία 259
σκάλευθρον 193, 195	στεροπή 51, 72	ταλασίφρων 201, 228
σκάλλω 237	στεροπηγερέτα 148	ταλαύρινος 201
σκάλοψ 193 f	στη- 209	ταλάφρων 201
σκανθαρίζω 74	στοβάζειν 50	τᾶλις 72
σκεδάννυμι 188 f	στόμαχος 222	ταμεσίχρως 206, 221 f, 228 f
σκέδασις 189	στοναχή 192, 206, 241	τάμνω 198, 221, 228, 235, 251;
σκελετός 237	στόρνυμι 231-4, 240, 245, 252;	see τέμνω
σκελεφρός 237	ἐστόρεσα ἔστρωσα 227; ἐσ-	
σκελιφρός 237	τόροται ἔστρωτο 203, 211,	ταναός 190 f, 249
σκέλλω 237, 251; σκήλει' 251;	229	ταναύποδα 190
ἀπέσκλη 226	στορπά 51	τανηλεγής 39, 100n
σκέραφος 190	Στορπαῖος 51	τανυήκης 190
σκέρβολος 190	στράγαλος 285	τανύω 279
σκιαρός 184	στράπτω 72	ταράσσω 199
σκιδαλεύω 193	στρατός 204, 211, 243, 245, 259,	ταραχή 199, 206, 208
σκίδναμαι 250n	280 f	τάτα 135
σκιερός 184	στρεύγομαι 86	ταῦρος 134, 177 f
σκιμβάζω 50, 72	στρέφω 86	ταΰς 249 f
σκινδαλ(α)μός 194	στροτός 204, 211, 243	ταΰσας 249
σκινδαρεύεσθαι 74	Στρύμων 185	ταυτᾶ 146
σκινδυλεύω 194	στρωτός 204, 210 f, 213, 217	ταύτε 146
σκινθαρίζω 74	Σύβριτα 194	ταφεῖν 74, 177
σκιφία 74	συβῶτα 148	τάφος 177
σκληρός 237	συναρήρακται 117, 119	τάχα 159
σκληφρός 237	συνέντης 255	-τε 153n
σκολόπαξ 72	συνhέρξοντι 62	τεθρᾶσθαι 216, 260
σκῦλα 243	συνοκωχή 125	τείρω 178
σκύλος 243	συνοχωκότε 117, 119	τειχεσιπλῆτα 150
σμερδαλέος 84	συγοικία 255	τέκμαρ 202
σμερδνός 83-5	σφαδάζω 188, 216	τέκμωρ 202
		S. B.

φέρω 247

Classical Greek

τέκταινα 155
τελαμών 201, 206, 229
τελεστα 148
τελευτή 38
τέλος 276
τέλση 275 f
τέλσον 275
τέλωρ 201
τέμαχος 206, 221 f
τέμει 235, 275-7
τέμενος 206, 221 f, 259, 292
τέμνω 221-3, 232, 235, 237:
τέμνω 221-3 , 232, 235, 237; ἔτεμον 221-3, 227, 251, 278 f;
τόμοντες 223, 251
τέναγος 192, 206
τενθρηδών 74, 194
Τευμήσσιος 194
τέραμνον 'house' 191
τέραμνον (gloss) 192
τεράμων 192
τέρας 201 f
τέρεμνον 191
τέρετρον 178, 228 f, 237, 239
τέρθρον 239
τέρμα 239
Τερμησσός 194
τέρμων 239
Τερνεσ(σ)ός 194 f
τέρρητον 234
τετμεῖν 223
τέτορεν 291
τετραίνω; τέτρηνα 237
τετρώκοντα 157
τῆ 146
τήκω 183
τῆλε 153n
-τι 157
τίθημι 166
τίκτω 225
τίτρημι 245
τιτρώσκω 178, 233; τορεῖν 178,
217 ; ἐξέτρω 226
τλάμων 201
τλάω 200
τλῆναι 200 f, 226, 240, 244;
τλάσομαι 214; τέτλαμεν 203,
244-6
τλητός 201
τμήγω 183, 200, 235, 246;
τμάγω 221; διέτμαξεν 221
τμῆσις 228
τμητός 218 f, 221
τόλμα 201, 239 f, 241, (254, 267)
τολμάω 200, 239 f

```
τόμοντες 251
-τομος 259
τοξότα 148
τόρμα 239
τόρμος 239, 241
τράγος 246
τρανής 178, 192, 237
τραυλός 178
τραῦμα 177 f
τρέφω 177η; τετράφαται 63
τρητός 178, 218 f, 237, 239
τρηχύς 199
τρία 157
τριάκοντα 157
τρίβω 178
τρύγη 72
τρυπάω 178
τρύχω 178
τρύω 178
τρω- 178
τρώγω 247
τρώξ 246
τρωτός 211, 233
τρῶ(υ)μα 177 f
τύπτω 251
ύγιής 53, 254 f, 288
ύδαρής 184, 202
ΰδερος 184
ύδέω 89
ύδρος 184
ΰδωρ 30, 67, 184, 202
ΰπ (ὔπ) 255
ύπεμνήμυκε 117, 119
ύπερηνορέων 75
υπωρυφια 38
ύσμίνη 97
ύφαίνω 67; ύφηνα 171
ύψερεφής 71
ύψηρεφής 71
ύψόροφος 71
φάλαγξ 192
φάος 178
φάραγξ 197, 209
Φαραί 28
φαρέτρη 228 f
φάρυγξ 197
φάσις 167
φάτνη 178η
φατός 167
φέρετρον 228
```

φέρμα 239

φέρτρον 228, 239

```
φημί 167
Φηραί 28
φθάνω 19
φικατι 62
φλαῦρος 72
φορμός 239
φόρτος 239
φράτηρ 21
φρέαρ 21, 238
φρείατα 234
φῦναι 227; ἔφυτον 169
φωνέω 167
φωνή 167
φώρ 247
χαίρω 279
χαλάζα 192, 209
χαλαρός 192, 209
χαλάω 192; χαλῶσι 223; χα-
  λάσσομεν 260
χαμα- 196
χάος 178, 183, 282
χάραδος 192
χαράδρα 192, 206
χάσιος 49
χάσκω 178
χατέω 182
χατίζω 183
χατίς 183
χάτις 183
χάτος 183
χαῦνος 178
χείρ 76n
χέραδος 192, 206
χέω 224n, 226 f
χθαμαλός 196
χθές 19, 24, 72
χθών 19, 196
χῆρος 183
*χῆτος 183
χιτών 178η
χλαρόν 192
χλιαρός 184
χλιερός 184
χόανος 140
χόλαισι 192, 223, 260
χραισμέω 178
χρεμετίζω 192
χρέμπτομαι 192
χρόμαδος 192, 206, 241
χρόνος 168
```

χρυσόρραπις 246

ψαίω 190 ψάμαθος 189, 290 ψάμμος 189 ψαφαρός 190 ψῆν 190 ψῆφος 190 ψόμμος 189, 292 ώδε 147 ώθέω 251 ὥλαξ 40 ὥλκα **58**, 275 f ὧλένη 20, 22 ὧλεσίκαρπος 236 ὥνατο 241, 262

ỗνος 58 ὅρα 96 ὧρος 30, 58 ὧς 168 ὧς 98, 147